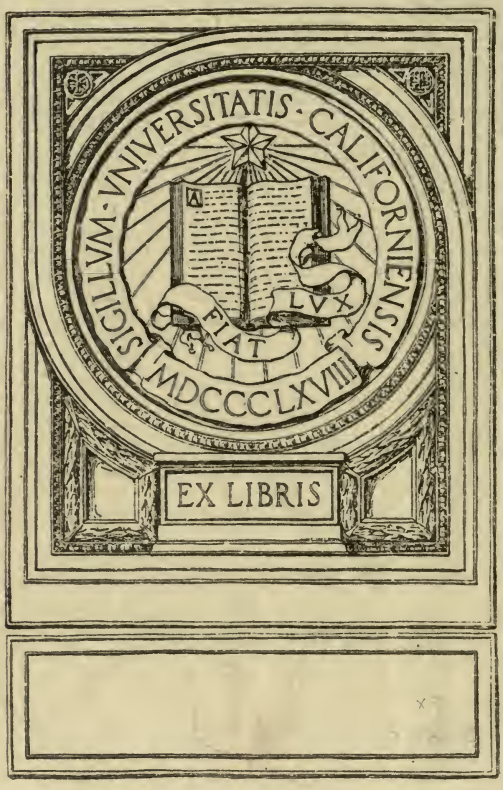

SIGILLVM · VNIVERSITATIS · CALIFORNIENSIS
LVX
FIAT
MDCCCLXVIII
EX LIBRIS

Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

http://www.archive.org/details/modernproblemsdi00lodgrich

MODERN PROBLEMS

MODERN PROBLEMS

A DISCUSSION OF DEBATABLE SUBJECTS

BY

SIR OLIVER LODGE

PRINCIPAL OF THE UNIVERSITY OF BIRMINGHAM

UNIV. OF CALIFORNIA

HODDER & STOUGHTON
NEW YORK
GEORGE H. DORAN COMPANY

AC8
L6

Copyright, 1912,
By George H. Doran Company

UNIV. OF
CALIFORNIA

TO

GEORGE CADBURY

IN RECOGNITION OF HIS

PUBLIC SPIRIT AND SOCIAL SERVICE

WITHOUT ASSUMING ANY AGREEMENT ON
HIS PART WITH THE VIEWS EXPRESSED

THIS BOOK IS DEDICATED

259896

PREFACE

THESE essays on debatable subjects have been written at different times—some of them under stress of strong feeling—and they deal with problems of permanent interest. A few have appeared in serial or other form, and in their case thanks are due for permission to reprint. Lectures and Addresses on educational, psychical, and ordinary scientific subjects have been excluded, but may possibly appear in future volumes.

CONTENTS

		PAGE
I	Free Will and Determinism	1
II	The Nature of Time	6
III	Balfour and Bergson	26
IV	Huxley on Man's Place in Nature	58
V	The Position of Woman in the State	74
VI	The Responsibility of Authors	81
VII	Universal Arbitration, and How Far It Is Possible	96
VIII	The Irrationality of War	108
IX	The Functions of Money	120
X	The Pursuit of Wealth	144
XI	Public Wealth and Private Expenditure	172
XII	Some Social Reforms	191
XIII	The Poor Law	229
XIV	Charity Organization	233
XV	Squandering a Surplus	242
XVI	The Production and Sale of Drink	256
XVII	The Smoke Nuisance	265
XVIII	Competition *v.* Co-operation	281
XIX	Ruskin's Political Economy	297
XX	Huxley's Lay Sermons	311
XXI	The Attitude of Tennyson Towards Science	329
	Index	337

please look on page 11
UNIV. OF CALIFORNIA

MODERN PROBLEMS

I

FREE WILL AND DETERMINISM

THE conflict between Free Will and Determinism depends on a question of boundaries. We commonly ignore the fact that there must be a subjective partition in the Universe separating the region of which we have some inkling of knowledge from the region of which we have absolutely none; we are apt to regard the portion on our side as if it were the whole, and to debate whether it must or must not be regarded as self-determined. As a matter of fact, any partitioned-off region is in general not completely self-determined, since it is liable to be acted upon by influences from the other side of the partition. If the far side of the boundary is ignored, then an observer on the near side will conclude that things really initiate their own motion and act without stimulation or motive, in some cases; whereas the fact is, that no act is performed without stimulus

or motive, whether it be rational or irrational. Madness and delirium are natural phenomena amenable to law.

But in actual life we are living on one side of a boundary, and are aware of things on one side only; the things on this side appear to us to constitute the whole universe, since they are all of which we have any knowledge, either through our senses or in other ways. Hence we are subject to certain illusions, and feel certain difficulties: the illusion of unstimulated and unmotived freedom of action, and the difficulty of reconciling this with the felt necessity for general determinism and causation.

If we speak in terms of the part of the universe that we know and have to do with, we find free agencies rampant among organic life; so that "freedom of action" is a definite and real experience, and for practical convenience is so expressed. But if we could seize the entirety of things and perceive what was occurring beyond the range of our limited conceptions we should realize that the whole was welded together, and that influences were coming through which produced the effects that we observe.

Those philosophers, if there are any, who as-

sert that we are wholly chained bound and controlled by the circumstances of that part of the Universe of which we are directly aware—that we are the slaves of our environment and must act as we are compelled by forces emanating from things on our side of the boundary alone,—those philosophers err.

This kind of determinism is false; and the reaction against it has led other philosophers to assert that we are *lawlessly* free, and able to initiate any action without motive or cause,—that each individual is a capricious and chaotic entity, not part of a Cosmos at all!

It may be doubted whether anyone has clearly and actually maintained either of these theses in all its crudity; but there are many who vigorously and cheaply deny one or other of them, and in so denying the one conceive that they are maintaining the other. Both the above theses are false; yet Free Will and Determinism are both true, and in a completely known universe would cease to be contradictories.

The reconciliation between opposing views lies in realizing that the universe of which we have a kind of knowledge is but a portion or an aspect of the whole.

We are free, and we are controlled. We are free, in so far as our sensible surroundings and immediate environment are concerned; that is, we are free for all practical purposes, and can choose between alternatives as they present themselves. We are controlled, as being intrinsic parts of an entire cosmos suffused with law and order.

No scheme of science based on knowledge of our environment can confidently predict our actions, nor the actions of any sufficiently intelligent live creature. For "mind" and "will" have their roots on the other side of the partition, and that which we perceive of them is but a fraction of the whole. Nevertheless, the more developed and consistent and harmonious our character becomes, the less liable it is to random outbreaks, and the more certainly can we be depended on. We thus, even now, can exhibit some approximation to the highest state—that conscious unison with the entire scheme of existence which is identical with perfect freedom.

If we could grasp the totality of things we should realize that everything was ordered and definite, linked up with everything else in a chain of causation, and that nothing was capricious and uncertain and uncontrolled. The totality of

things is, however, and must remain, beyond our grasp; hence the actual working of the process, the nature of the links, the causes which create our determinations, are frequently unknown. And since it is necessary for practical purposes to treat what is utterly beyond our ken as if it were non-existent, it becomes easily possible to fall into the erroneous habit of conceiving the transcendental region to be objectively as well as subjectively non-existent.

II

THE NATURE OF TIME

WITH EMPHASIS ON OUR DIRECT PERCEPTION OF MOTION

DURING a meeting of the Aristotelian Society in Birmingham, in 1909, I was privileged to hear a debate on fundamental questions of Ontology between such masters in Philosophy as Professor Alexander, Professor Stout, Professor A. E. Taylor, Dr. Schiller, Mr. Sturt, and my colleague, J. H. Muirhead; and I was impressed once more with the important part played in such discussions by varying views concerning the ultimate meaning and reality of the thing familiarly known as "Time." Wherefore it seemed to me that a statement by a Physicist concerning the allied and sometimes needlessly involved conception of *Motion* might tend to clear the ground.

I call the idea of motion needlessly involved, because it is by some treated as if its conception involved a kind of antinomy; and I have occasionally thought that a modern version of the

ancient paradox of Zeno and the Eleatics is still in some sort extant.

Now in all departments of science the existence and perennial vitality of paradoxes—by which I mean the rational establishment or elaboration of impossible and untrue propositions—is always the index of something wrong, or at least foggy, in the system of thought—some dislocation between the prevalent mode of apprehending things and the things themselves. And it was with the object of upsetting some prevalent and orthodox doctrine that paradoxes were invented. When the right point of view is attained, the paradox disappears—sometimes so completely that it is difficult to reconstruct the ancient sophism, as in College lectures we sometimes do, for historical and educational purposes.

In Physics there have been many such paradoxes, some of them of a curiously vivid kind—for instance,

That a horse cannot pull a cart, because action and reaction are equal and opposite;

which I remember was overcome in one textbook of Mechanics (now out of date) by the admission that the pull of the horse must be the *tiniest* bit

greater than the pull back of the cart—else in truth the cart would *not* start moving!

Since this paradox is still a stumbling-block, and is still occasionally employed to throw doubt on the correctness of Newton's third law of motion, I may be allowed incidentally to explain that the surface-puzzle is entirely self-generated by the tacit and false assumption that the two equal opposite forces act *both on the same body*. If they did, they would in truth balance. But as they act on different bodies no question of balance arises. Only one effective force acts on the cart at starting, namely, the pull of the horse; and therefore it yields to that force and moves, with appropriate acceleration. The reaction, or equal opposite force, acts not upon the cart but upon the horse; and that force does in fact obstruct his motion until he can get a grip of the ground sufficient to propel both the cart and himself.

Another old physical puzzle of a slighter character is "the hydrostatic paradox," about the pressure on the two faces of the base of a conical vessel, full of liquid, not being equal. The interior pressure can be much greater than the weight of the contents: there is indeed no connexion between the weight of liquid in a vessel

and the pressure it exerts on the base. The shape of the vessel is involved in the one, but not in the other. It is fairly obvious, in this case, that the solution of this slight but historical puzzle is to be found by taking into consideration the magnitude and direction of the pressure on the sides.

The ancient argument about the impossibility of motion runs somewhat thus—

Matter must be in one place or in another, and there is no such thing as a transitional place; therefore, a body cannot travel from one place to another, since it would thereby have to cross an intermediate position. Or thus—

A thing as it moves must occupy a given position at each instant, and cannot be elsewhere also. Therefore, it can never leave its place; for if it did, it would be in two places at once, or else in no place at all.

I am surprised to find that the other ancient and allied puzzle of Achilles and the tortoise is regarded with apparent seriousness by Professor William James; not of course as establishing any matter of actual fact, but as involving us in logical contradiction if we admit the plain truth. Such a paradox is surely condemnatory of the system of thought which enabled it to be formulated: and

I suppose that that is Professor James's real contention—just as it was Zeno's. If so, I agree; *it condemns the conception of discontinuity in either space or time.* But occasionally he speaks of discontinuity as if it were a necessity of thought, and as if continuity were outside our faculty of conception—as if the subdivision of things into units, each of which must be considered separately, were anything more than a recognized artifice, handy for some purposes, needless and even confusing for others. If so, in that respect I disagree, and would ask any one who thinks otherwise to do me the honour to read chapter xx. of my Arithmetic book, published under the title *Easy Mathematics,* by Macmillan—the chapter, namely, on Continuity and Discontinuity.

Briefly I will repeat what is, I suppose, obvious, that *number* is essentially discontinuous, while space and time are essentially continuous. Any subdivision of either space or time for numerical purposes causes it to put on an appearance of discontinuity which is both false and artificial. The application of number is natural to coins and oranges, to days and years, to yards and acres, and to fractions; but the units whereby a continuous quantity can be numerically dealt with,

such as hours, miles, provinces, and degrees of temperature, are human artificialities.

The argument asserts that Achilles cannot cross a certain distance because it is infinitely subdivisible and he must take the divisions *seriatim*. But the divisions are nothing: they are non-existent—if they are depicted they are mere lines, of no finite breadth at all, and therefore take no travelling over. To traverse an infinitude of such divisions requires no effort and involves no delay. It is the interspaces which are real, and they are just the same whether numbered or not. The artificial subdivision and numbering of a given space leaves it precisely what it was before, save that the numbers attract attention and convey a suggestion of something laborious and time consuming. But they are mere decoration. In so far as the operation of numbering confuses the mind, it thereby proves itself for the purpose a wrong and useless and wasted operation. The condition it implies is *nothing*. If Achilles had to turn a somersault at every division, then indeed the tortoise would win the race: but as he has to do nothing but ignore the non-existent, the tortoise has hardly a sporting chance.

Similarly the Zeno paradox against the possibility of motion may be said to be based upon—and to have been invented in order to controvert—a tacit assumption of numerical discontinuity in space; though in so far as it is alive to-day, it seems to require for its vitality *a static idea of time*. Time is given to us in instants, and only the present instant *for us* exists. We apprehend the universe moment by moment. All that has gone before is past: all that is coming is future: the present is the instant of transition between these two regions of conception. It is actually infinitesimal; it has no duration; and yet it is for us the sole real existence. Hence arises whatever trouble can be manufactured by misplaced thought concerning motion.

Take Time as one of our fundamental primary ideas, directly apprehended; take its manifestation as instantaneous—*i.e.* as discontinuous as the motion of a clock-hand—and the universe must be full of paradoxes. The idea of time at once statifies itself in our minds, existence is frozen, and motion becomes impossible. Whereas in truth the lifeblood of the universe is change, is motion; it is not static but kinetic—it is a becoming, not a being; and *time*, as we know, is a uniformly flow-

ing quantity, an inexorable and regular Progression, proceeding not by numerical or arithmetical stages, but in continuous flow—a uniform rate of conversion of the future into the past.

THE STREAM OF TIME

Is existence outside the present instant real? Surely, yes. We in our thought transcend the present instant—we record history, we make plans for the future—although our activity and real experience is limited to the instant now. No wonder that we conceive of a Higher Being who is not thus limited, who can appreciate sequence as an aspect only of coexistence, who can travel up and down the stream of time without waiting for the stream to come to Him, who can dwell in the past and the future as well as in the present. And so it is no wonder that we are tempted occasionally to speak of Time as an unreality, an appearance only, and a deception.

Nevertheless succession in time is a fact; it is not an hallucination. Things do occur, do develop, do evolve. A tree in leaf follows a tree in bud, and that follows the bare twigs of winter. A solar system likewise collects, blazes, and decays: it endures for a certain time.

Puzzles about duration and succession, about coexistence and sequence, are avoided, or greatly minimized, by recognizing that our direct primary form of apprehension is not either space or time, but *Motion.*

MODES OF APPREHENSION

Most people consider motion to be not only compounded of space and time, but to be primarily and inevitably perceived as so compounded: whereas in truth both Space and Time are inferences—abstract ideas derived from muscular experience—they are not direct apprehensions at all, any more than "Matter" is. What we directly apprehend is Motion; motion and force are our two primary sensations, and by their aid we construct the material universe—that is, our ideas concerning physical existence—including space, time, and matter. Speed is *not* most simply expressed in miles per hour or feet a second, save for purposes of calculation involving number. Speed is continuous, and number is not natural to it. Natural basal units of speed ought to be—they are, in our minds—irrespective of units of space and time. We can think of the speed of light, of sound, of the earth in its orbit, of an

athlete, of a snail, of a glacier. Each makes a direct impression upon us. To express it in centimetres per second or miles per day is artificial and involves an effort—involves also work with measuring instruments. The savage knows the speed of an arrow, of a bird, of a stream, just as he knows the heat of a fire or the cold of ice—he would never think of applying arithmetic to any of these things.

So likewise we—even when we are observing the speed of a spinning-top or a fly-wheel, where the fact of rotation seems to give an excuse for numerical specification—for counting the number of revolutions—we do not apprehend its motion after the manner of those speed-counters which indicate revolutions by figures on a dial and have to be timed by a watch. These act by a combination of number and time. Our apprehension of speed, even of rotation, is more direct, and is more analogous with those tachymeters which indicate it directly—by the elevation of the balls of a governor, or by some other manifestation of centrifugal force. The oblateness of a planet, for instance, measures the length of its day; the shape of a flying tennis-ball indicates its spin.

So it is with our direct apprehension of every

kind of motion. What we get directly from our muscular sense is the sense of motion free, and the sense of motion resisted;—the sense of *motion,* of quick and of slow motion; and the sense of *force,* of greater or less obstruction. Both are fundamental apprehensions; and any system of thought which contradicts this primary awareness involves itself in paradox and proves itself to contain a flaw.

From our sense of Force, *i.e.* of Resisted motion, we infer the presence of matter;—into that I will not now further go. From our sense of free motion we derive our idea of space. From our sense of rapidity and slowness we construct our idea of time.

Some philosophers appear to think that because space is a static conception we must have arrived at it statically. But if neither we nor anything could move we should have no sense of extension. Mere sight of or contact with an expanse would tell us nothing, if motion were permanently forbidden. Without *change* there could be no sensation. In a dead uniformity we should not even know of an external world.

Space is the static abstraction from motion: Time is the kinematic factor, likewise abstracted

see you on page 81

from the same experience. The sense of muscular exertion is involved in both. If we have run fast till we are tired, we know that we have gone a long way. If we saunter over the same distance, we know that we have consumed much time. *There* is our fundamental tape-measure, *there* is our primary clock.

THE QUESTION OF REALITY

The question, Does time exist? is a legitimate one; for time is an inference which may or may not correspond with reality. The question, Does matter exist? is another legitimate question, and one that has often been asked. I should answer both questions in the affirmative, and should plead that these ancient and universal inferences should be trusted. They originate as abstract ideas, but they correspond to concrete reality. They are not directly apprehended, but they *are* apprehended and they are real.

In the first place, any question as to the reality of *motion* is absurd. It is part of our own existence, and cannot be questioned, save by a comprehensive scepticism which overwhelms everything and nullifies itself. For in that case there is no one to be sceptical and nothing to be sceptical about.

Space is primarily an abstraction, dependent on our perception of continued motion; and on that abstraction alone geometry may be based. But if we conceive space to be a *reality*—as we do—we may proceed to investigate its other properties, beside extension, and may find it, by aid of physics, to be substantial, and may endow it with the properties of an Ether, which, for all we know, is coextensive with it.

Matter is primarily an abstraction or mental concept, invented to account for or to summarize conveniently our consistent apprehension of localized Resistance. But as soon as we conceive of matter as a reality, we proceed to investigate its other properties, and thus create the science of Chemistry and a portion of the science of Physics. The hypothesis that matter is real is pragmatically justified.

So it is also with Time. Time is primarily an abstraction, devised so that in combination with space we may formulate our direct experience of varying degrees of rapidity of motion. Every kind of clock is a moving body, and every steadily moving body will serve as a clock. Our apprehension of time is derived from motion and space: motion is not derived from space and time, though

its artificial measurement may be expressed in their terms.

The units of time are manifestly and obviously artificial; it is not given to us in seconds or in any other discontinuous and countable units. It is a continuum, like space; and though we "break up into Thens and Whens the eternal Now," we do it in the same way, and for the same sort of reason, as we subdivide a yard-measure, or place milestones on the Dover road.

We apprehend time instant by instant, but we conceive it as a uniformly flowing entity—as something which flows past us, or at the moments of which we arrive;—precisely as we might apprehend the divisions and interspaces on a yard-measure drawn past us, if we could see them only one at a time—all the rest being hidden from us, and being past only, or future.

A microscopist does in truth thus study the structure of a solid, dividing it into an orderly succession of slices by his microtome, and studying them one after the other. Thus has originated the idea of a fourth dimension, through which we are travelling and apprehending only in sections—each section as it arrives being called "the present." In this analogy, *change* and *se-*

quence are modes of apprehension rather than ultimate realities; they are subjective aspects of a universe itself unchanging.

But sooner or later the analogy breaks down, like all other analogies. The microscopist knows that the sections he had not yet cut are already predetermined—that the structure he is studying is really *there,* and that he has only to ascertain it. We do *not* know that it is so with the process we call time, or with the thing we call the future. Here come in all the puzzles—to us apparently real and legitimate puzzles—about fixed fate, foreknowledge, and free will; and I am not going to tackle them too closely. There is no compulsion to press the dimensional analogy, or any other analogy, unduly. In slicing through a solid we know that its anterior—or perhaps we should say posterior—portion already exists. In slicing through our hypothetical fourth dimension we do not know how far or in what sense the future already exists, or how far it is affected by what we are doing now. Perhaps we are introducing something into it at every slice.

If evolution and progress are realities, and not dreams, it may be that the future is conditioned by the past. Even though the future may in some

sort already exist, it may be waiting for the sap, the life-blood, the vivifying pabulum, which will convert it into the present—pabulum which the past has prepared and which the present is conveying into its veins—so that its real and vital significance may be modified and readapted and controlled by the activities which are now going on. The future of the tree before me will not be unmodified according as I do or do not take a knife and slash into its bark. Self-determining beings may exist, and as part of the controlling and determining agency of the universe may create works that are new, and may intrude into the future conditions which would otherwise not be there. So also the future may be full of self-determination, actuated and influenced in part by what is occurring here and now. It is for us to ascertain and find out the truth: not to be satisfied with a priori assumptions of impossibility. Our conceptions of *the possible* need training and widening. Strange, indeed, if this should be contested!

Another useful analogy can be drawn from the loom of the weaver. Each thread is laid down in the present. The woven pattern is the past. The determining "cards" are the future. It all

represents a plan, but the plan is prehistoric—is outside the scheme, is something inconceivable to the loom and to the flying shuttle—even to the working weaver, perhaps. This analogue also depicts, it is true, a determined universe—the universe of Omar Khayyám. But no analogy coerces. A loom may be imagined or even constructed otherwise. It would be feasible to arrange so that each thread as it arrived—either by its contact with the thread preceding, or by the way it enters, or by its tautness or slackness, or by its electric properties—that each thread should itself affect the pattern-determining cards, should modify the arrangement, should introduce fresh conditions (after the haphazard manner of a kaleidoscope this could be done if desired), and should thus assist in determining the resulting—the future—pattern.

Even by machinery this could be managed. And if the future, instead of being a mere mechanical entity arriving in due preordained sequence, is itself composed of, or dominated by, living intelligence—if the sections as they arrive are the result of what is even now being prepared in the future which is beyond our ken—then there may be reason to suppose that that future may be

modified by what is occurring here and now, and that active living and loving Intelligences which dominate it may be influenced by our longing, by our exertion, by our prayers. There is no absurdity or contradiction in the idea; it is a question of fact, it is a legitimate subject for investigation.

And the past also—it is not non-existent, it does not succumb immediately to the devouring tooth of time, it is the region of achievement. In the loom analogy the past is the pattern for which the machine exists, for which the labour is undertaken: it is the finished work. In so far as it is a work of art the labour was worth while; and our works of art, which seem to be perishing, may have an immortality of their own, akin to the immortality of poetry. The characters of Shakespeare are not dead, and cannot die—they have not lived a mortal life—they are essentially immortal. Nor is the creator really likely to be more evanescent than his work. These things are in eternity, they are out of time, they subsist for ever. All the greatest things are of this nature, and are free from the limitations of time. For time is a limitation, an ordered and constraining sequence, though nevertheless real. Perhaps

absolutely real and essential, certainly subjectively real and appertaining to the human aspect of the Universe.

So that Time—originally arrived at by us as an abstraction, like space and matter—may, like them also, put on the aspect of reality and may exhibit in itself properties—properties far from simple or obvious—which we may rightly investigate and try to understand. The law of Evolution is one of the formulated attempts to understand the nature of time; and if time is in truth a fundamental reality, as I conceive matter and space also to be—though they are none of them fundamental or primary modes of perception—then we may seek to apprehend and formulate the various bearings of the idea of Evolution in ways clearer and more thorough than have yet been attempted.

The hypothesis is worth making, just as the hypothesis of the real existence of matter has been worth making; it has been justified by its fruits, it has "worked," as the Pragmatist says. And this other hypothesis, that time is a real and not a hallucinatory process, may work too.

Nevertheless, though we may maintain that the succession of events, the facts of growth and

change, are not hallucinatory, that they are real enough, we cannot safely assert that they are so real as to be eternal. There are facts which suggest that there is a higher kind of existence—an existence already attained by our loftiest work, and existence appropriate to creations of genius—a kind of existence, or subsistence, or supersistence, which transcends present limitations, which has been raised or put ashore out of the current of the time-stream into a freer and diviner air, where the past, the present, and the future are united in the transcendental coexistence of a more copious reality. The aim even of a human artist is to produce work which shall be thus transcendent and immortal. And the Creator need not be supposed subject to human limitations. But we are now entering on Theology, and I refrain.

Let me repeat that if we owe all original knowledge to our primary experience and fundamental sensations, we must have arrived at our conceptions of the Universe—of space, and time, and matter, of other intelligences, of the Deity, and of real and progressive existence—by utilization and development of notions derived from our primary and direct sense-perceptions of MOTION, of SPEED, and of FORCE.

III

BALFOUR AND BERGSON [1]

More than thirty years ago, when many of us were still in the unfledged student period, Mr. Balfour published a book which rebelled to some extent against the orthodox philosophy of that day. Its aim was to show that the most positive science was based on a tacit system of axioms and postulates—and, for that matter, of intuitions—which were no whit stronger in reality than those on which some of the main religious doctrines are based. But the title, *A Defence of Philosophic Doubt,* deceived many of the public; they took it to be a defence of religious scepticism—the popular word "doubt" being almost more alarming than the technical term "scepticism" which had been discarded from the title—so the timid orthodox ignored it, while the few who were attracted rather than repelled by the suggestion soon found

[1] An Article in the *Hibbert Journal* for January 1912 in response to an Article in the preceding issue, by Mr. Balfour, commenting on and partly criticizing the philosophy of Professor Bergson.

it useless for their purpose. Nevertheless, the advance of modern thought certainly tends in the direction advocated by that book; and it is natural for Mr. Balfour, in approaching a criticism of M. Bergson, to preface his remarks by an allusion to this book and a repetition of part of its thesis:

"that the theory of experience and of induction from experience needs further examination; that the relation between a series of beliefs connected logically, and the same beliefs mixed up in a natural series of causes and effects, involves speculative difficulties of much interest; and that investigations into the ultimate grounds of belief had better begin with the beliefs which everybody holds, than with those which are held only by a philosophic or religious minority."

He also quotes a proposition from his later book, *Foundations of Belief,* where he claims:—

"that in accepting science, as we all do, we are moved by 'values,' not by logic. That if we examine fearlessly the grounds on which judgments about the material world are founded, we shall find that they rest on postulates about which it is equally impossible to say that we can theoretically regard them as self-evident, or practically treat them as doubtful. We can neither prove them nor give them up."

I have been asked to contribute to the friendly discussion which Mr. Balfour has opened—indeed, to reply to his criticism in an interim manner, until such time as M. Bergson himself may be able to write further on the subject. But, if I thus presume to intervene, it is obviously necessary for me to speak from the side of science rather than from the side of philosophy; and it is only because I regard M. Bergson's philosophy as peculiarly acceptable and interesting to men of science that, amid the press of duties, I welcome the invitation.

IS THERE ANY INFALLIBLE KNOWLEDGE?

I wish to preclude my remarks by acceptance of the main part of Mr. Balfour's contention, as above set forth: though truly there is nothing peculiar or venturesome in that acceptance now, since many physicists would say—some indeed have said—the same sort of thing.

The usual index set up in the contrary direction is attached to the finger-post of mathematical axioms and theorems. For instance, it is said that the three angles of a triangle do really equal two right angles, and there is no hypothesis or approximation or uncertainty about it. About

the abstract plane triangle, No. But what about a concrete triangle—one traced on the surface of a calm sheet of water, for instance? The surface is part of a sphere, and the proposition is not true. Or the lines of least distance between three stars?—I should not venture to doubt it in that case myself, but that brilliant mathematician, W. K. Clifford, maintained [1] that we could not be sure that there was not some discrepancy, increasing in proportion to area of triangle, such as had been studied by great modern geometers, and which we may call, roughly, a possible curvature of space, which would make the proposition appreciably inexact for a sufficiently gigantic triangle.

In other words, abstract mathematical propositions are infallibly true for the abstractions with which they deal, but when applied to concrete realities they involve an element of contingency in no respect differing from the rest of human knowledge. The following quotation from Clifford (*loc. cit.*) will forcibly illustrate the fact that mathematicians are not blind to this view:—

[1] Lecture to British Association Meeting at Brighton in 1872. See *Lectures and Essays of Clifford,* edited by Leslie Stephen and Sir Frederick Pollock, vol. i, p. 155.

"The conclusions to which these investigations [those of Lobatschewsky and Gauss, of Riemann and Helmholtz] lead is that, although the assumptions which were very properly made by the ancient geometers are practically exact—that is to say, more exact than experiment can be—for such finite things as we have to deal with, and such portions of space as we can reach; yet the truth of them for very much larger things, or very much smaller things, or parts of space which are at present beyond our reach, is a matter to be decided by experiment, when its powers are considerably increased."

And in order to illustrate the matter further, in what may seem almost a frivolous way, I would contend that whereas the proposition that one added to one makes two is abstractedly beneath controversy, it need not be true for the addition of concrete things. It is not true for two globules of mercury, for instance, nor for a couple of colliding stars; not true for a pint of water added to a pint of oil of vitriol, nor for nitric oxide added to oxygen, nor for the ingredients of an explosive mixture; not necessarily true, either, for snakes in a cage, or for capital invested in a business concern, flourishing or otherwise; nor is it true, save in a temporary

manner, for a couple of trout added to a pond. Life can make havoc of arithmetic.

The moral of all which is, that propositions can be clear and simple and sure enough, indeed absolutely certain, as long as you deal with abstractions; but that when you come to concrete realities, and have all the complexities of the universe behind you—nor only behind but in front and among and intermingled with every simplest thing,—then we perforce step out of the realm of positive dogmatic security into the region of reasonable and probable inference, the domain of pragmatic conviction, of commonplace intuition, of familiar faith.

This surely is analogous to what is maintained by William James, and also by Professor Bergson. They claim that the philosophy of the past has formulated a complete scheme too speedily; that in the present stage of our knowledge a thoroughly unifying philosophy is not attainable; but they fully admit that unification should shine before us as an ideal, and that we should carve our way towards it by the best steps immediately possible. Theirs is a tentative and groping philosophy, just as ours is a tentative and groping science: no scientific man imagines that he un-

derstands the universe bottom up and through and through. There may be men in the street who do so, but in all worthy judgment we are only beginning our task of exploration; our organized system of truth is but a sample of what it will grow to be in the future; and, however far we look ahead, there will still be an infinitude of existence uncharted and unexplored.

To suppose that we have absolutely infallible security for some of our beliefs, extreme probability for others, and only practical conviction based on experience for some more, may be needlessly to raise up barriers against our own progress. Facts of existence ought to be allowed their due weight and be tentatively accepted, even though we cannot adduce superhuman testimony for their truth, and even though we cannot at present see how to weld them into one completely unified and comprehensive scheme.

But effort at unification must be made, and any system which accomplishes one stage, or opens out one avenue, towards that ultimate goal, without pretending that it has done more than prepare and make ready a portion of the way—such a system of thought is very welcome; and that is exactly what M. Bergson's system claims to do.

In comparison with this effort of his, some of the old philosophers—so far as an outsider may judge—have seemed to be beating their heads against a locked door to which no key could be found. With inadequate scientific equipment for the most part, and sometimes with elaborate complications of theory, they have led us up to the door again and again, but we have got no further. The barrier between mind and matter has remained unshaken. The conflict between freedom and necessity has waged as fiercely as ever. The two opposing sides clamor against the barrier, or try to fly over it, but the door remains locked. Some, like William James, recall us to common sense, and bid us cultivate both sides of our garden in peace and quietness, not worrying about the impassable barrier in its midst. Through mind and body, both sides are accessible to us, both are of practical service; and although they form two irreconcilable tracts of land, what of that? In all probability the door will never open; it has always been locked. Locked the door is still; but M. Bergson has found something that to me, at any rate, from a distance, looks very like a key. We have yet to clamber to its hiding-place, to clear away the

marl with which it is encrusted, and then try whether it will fit the lock.

MATTER AND CONSCIOUSNESS

For I conjecture that one of the features of the Bergsonian philosophy, though it is only dimly sketched in or barely indicated at present, is that the clue to the relation and interaction between matter and mind is contained in the idea that they have a common ancestry—that they are related somewhat as animals are to plants.

Widely divergent as the animals and vegetable kingdoms have now become during the long course of evolution, it is well known, or at any rate admitted without controversy, that they must have arisen from a kind of cell which was neither the one nor the other, but which incorporated the principle of life in its simplest most essential germ, and thus enabled life to gain a foothold on this planet, and gradually to manifest, through association with matter, the vast variety of which it was capable.

Taking this as a sort of parable, may we not conjecture that the faint beginnings of consciousness, and the fundamental rudiments of matter—utterly divergent as they are now, so that it is

surprising that there can be any sort of relation between them—may have arisen from something which was neither conscious nor material, but which had within it the potentiality of the development of both attributes.

To take another illustration: common salt is neither sodium nor chlorine, nor has it any of the properties of either of those vigorous elements, but Davy taught us its constitution, and showed us how the separation might be effected. So, on an altogether higher plane, this unknown *x*, let us say, had constituents or aspects of mechanism, and aspects or elements of freedom, in combination; and at a certain stage in evolution it became plain that they could develop better in mutually sustaining, and mutually opposing, independence. Consequently a separation took place —part of *x* became inert matter, absolutely controlled by *vis a tergo* forces, dependent wholly on the past and on surroundings; and part of it became life, with an incipient anticipation of the future, guided by perceptions rather than urged by force, influenced by habits and character rather than by external circumstances alone, and possessing nascent power of self-determination and choice.

Through this subdivision or bifurcation, regarded from a human point of view, part might be said to have become elevated in the scale of existence and part degraded; the degradation serving a useful purpose and being justified, just as the degradation of energy is frequently justified—the degradation of some often elevates the rest,—since thereby an instrument, a vehicle, a staircase was provided, steps on which the other portion could rise to higher things.

For by separation of the two entities or constituents of the universe, freedom and mechanism, an arena of conflict and struggle and effort was provided; and the result was that vigorous vitality appeared in the universe—it has appeared at least on this planet,—an output far more profitable, of far greater value, than the dead level of inactivity and beatific torpor which might otherwise have been the sole representative of Existence. Life, with all its potentialities, both of suffering and of enjoyment, came into being, and has continued to interact with and incarnate itself in matter ever since; making use of its many advantages, overcoming its many defects, obstructed and defeated by its passive resistance, yet coercing it into works of art, stimulating itself always

to greater and higher effort to overcome inherent difficulties, and to realize, sooner or later, some of its own far distant ideals.

To sustain such a thesis, or to hold even tentatively such a position, we must admit Evolution to be a great reality, and Time an entity of profound significance. For progress must really depend on Duration; and the condition of things in the far past must have been inferior, as a whole, to conditions which subsist to-day.

If it be asked how such a notion can be reconciled with the idea of Eternity, the only reconciliation I can suggest lies in the conception of possible alternations of phase, extending over vast regions of space and through great tracts of time. For it is conspicuously true that apparent waste and long periods of preparation—lavish provision for ultimate ends—are not eschewed by Nature.

To illustrate the meaning of phase-alternation in this connection, the alternation of summer and winter will serve. To an organism living only in the spring, the world would seem bursting with youth and hope, an era of rising sap and expectation; to an organism living only in the autumn, over-maturity, decay, and despair would be the dominant feature. But, to creatures whose life

is long enough, both phases are welcome, and are recognized as parts of a larger plan.

Just as the planet has gone through millennia of development, ages before a human race made any signs of appearing, so, without any knowledge of what is happening elsewhere, we may surmise that this region of space known to us has been evolved on fairly terrestrial lines, or on lines not utterly discordant, during this present vast era, of say a billion centuries. But what has happened to it at epochs so remote that imagination boggles at the conception of them, who is to say? Similarly, we know nothing of what is happening in the unimaginable depths of space, beyond the range of the most powerful telescope and most sensitive photographic plate. The process of evolution, in some of its many possible forms, cannot be limited to our portion of time and space alone; it may have gone through many phases in its majestic transformations, and may have achieved unknown and inconceivable results.

Speculation beyond our limits of time and space seems hardly likely to be fruitful—is not really legitimate save as a warning against a narrow view; its only merit lies in suggesting such an enlargement of scope as to remind ourselves

that not even by so novel a conception as the common ancestry of mind and matter—not even by discovering the nature of the unknown *x*, and recognizing the Cause which may have guided and be still guiding the special phase of evolution which moulds us and which we can dimly contemplate—not even so can we presume to be engaged in formulating any valid conception of the Ultimate, Omnipresent, Dominating, Eternal Influence, the Nameless, worshipped under a thousand names, and here best referred to in reverent silence as I AM.

What we can study in the highest Philosophy must really be as limited as that which we can study in the highest Science. Data there must be, boundaries and terminology there must be, to make things tractable or ideas expressible. The data of one branch of science are sometimes the objects scrutinized by another. The data of the Biologist are cells and nuclei and protoplasm. The data of Chemistry are atoms and molecules and forces of affinity. The data of Physics are matter and energy, ether and motion. The data of Philosophy are Space and Time, Mind and Matter, Life and Consciousness; and its problems concern their interrelation. The solution of these

problems—distant as that solution now seems—will leave plenty more unsolved. A fair comprehension of the nature of life, and the way it is able to interact with matter, must surely be within our human grasp. We are not near it yet, but the effort to reach it is worth while.

GUIDANCE OF ENERGY

The crux, the essential puzzle to be faced, comes out very clearly in Mr. Balfour's article. As M. Bergson has truly said, life utilizes solar energy to store organic explosives, and then pulls a trigger, a frictionless easy trigger, that requires only a nearly infinitesimal force. That is indeed a not unusual way of formulating its function, except among those who try to consider that life is itself a form of energy. But, says Mr. Balfour, to pull even a hair trigger *some* force is required, no matter how small. How is life or mind to exert force on matter? By what process is a mental idea translated into terms of physical motion? It is not enough that in organic life accumulated energy is released. "What is really essential," says Mr. Balfour, "is the *manner* of its release. If the release is effected by pure mechanism, fate still reigns supreme."

M. Bergson says that Life is

"something which avails itself of a certain elasticity in matter—slight in amount as this probably is—and turns it to the profit of liberty by stealing into whatever infinitesimal fraction of indetermination that inert matter may present."

I confess I cannot myself take refuge in this supposed slight indetermination of matter, this slight inaccuracy in the laws of physics. When we really find the key, its efficacy will depend not on any peculiarity or inadvertence, to be excused by reason of its smallness, but on some satisfactory and complete subservience to vital action potentially existing in and displayed by sufficiently complex organic molecules.

The interaction of mind and matter is a real and ancient puzzle. The brain and nervous system evidently constitute the mechanism by which it is accomplished, but the theory of the process is as yet incomplete—whether the result is purposed movement, or the translation of air-waves or ether-tremors into sensation of sound of definite pitch or light of definite colour. The transition from mind to matter, and *vice versa,* is an affair of everyday experience, but it is not understood.

There is nothing surprising in that, nothing that ought to tempt us to deny the existence of mind and take refuge in materialistic monism; it is stupid to deny merely because we do not understand. The much simpler occurrence of the fall of an apple is not understood either. Newton knew that well enough; and, though he applied it to astronomy, he never explained gravitation itself. Its nature remains unknown. This problem, however, is quite thinkable; it can be definitely formulated—at least by those who admit the existence of an Ether—and by some is thought to be beginning to show signs of being tractable by reason, even if not yet by experiment; while the other problem, the interrelation between mind and matter, is still excessively obscure.

My own view is that life does not exert force —not even the most miscroscopic force—and certainly does not supply energy; that the whole of its control over muscular movements is what is involved in the terms "aim" and "timing"; that it utilizes the spontaneous activities and processes of nature, and determines occasionally when they shall occur and for how long they shall be retarded. It can water one plot of ground and screen the sun from another.

Much guidance may be exercised by mere adjustment of relative phase in any pair of synchronous alternations which are already going on. Imagine an intermittent mountain-stream near a watershed above the Engadine, and let it work a synchronously oscillating sluice-valve. By merely adjusting the phase of its oscillations, the whole stream might be transmitted to the Danube, or the whole might be deflected into the Rhine.

By coupled alternation of phase, I signify such concordance or discordance between two rhythmical processes as shall combine them either for acceleration and advance, or for regress and retardation. For instance, to a physicist, the electric and the magnetic constituents of an electromagnetic wave is a well-known case; but a simple example is the slide valve and piston of a steam-engine. They are usually in accelerative or adjuvant phase, but by throwing them out of step the engine may be stopped or it may be reversed. Such readjustment may be brought about by the machine's own energy, and may be done either automatically, or in response to an intelligent arrangement or act of will.

What, then, I want to suggest is, that the spe-

cial changes produced in matter by will and intelligence are explicable by a process of timing —a process adapted to the directing of energy, quite independent of any alteration in its amount, and without any interference with—indeed with full assistance from—the laws of physics. The cells of the brain are presumably not stagnant until the will acts on them: the cells of a living body must be as active as atoms of radium. Energetic instability of structure is essential to protoplasmic molecules. Withdraw the controlling influence of life, and they speedily work havoc and devastation.

Illustrations abound. A pointsman may pull his lever over at the wrong moment and send a train to destruction, or at the right moment and send its passengers to their homes. They depend on the man's good will, and are safe until by habit or weariness his actions become mechanical, and one day mistaken. With insufficient food, it is true, he may not be able to act at all; but it is not his lack of energy that has to be inquired into in case of an accident, but its misdirection—the use he has made of it. The right lever, at the right time, is the essential thing.

Thus it is that a gun is aimed and fired by a

sportsman. All the energy is in the powder and the man's breakfast. He determines what shall be done with it, and brings about a desired extinction of life. In a cannonade, just as much energy and mental activity are needed to aim and fire at a friend as at a foe; the nicety of this difference is not physical at all. Whether a bill is read now or this day six months is all the same as regards the work of reading, but not all the same as regards the bill, and perhaps not all the same to the nation. Liberation of the energy of compressed air can be so timed by an organist as to re-awaken the thoughts of Bach.

All this can be admitted, and yet the question will remain—How does man pull the lever or press the key? How do I move any muscle of my body by an act of will? Physics and Physiology are expected to explain the whole of the material circumstances, both outside and inside my body; and roughly speaking they succeed in doing so; but neither will explain, nor does Psychology explain, how the mental idea translated itself into the necessary brain-cell-stimulus and nerve-impulse. There let us leave that problem at present, and enter on a new one; for the problem of the interaction of mind and matter is not yet solved.

TELEOLOGY

"Inert matter," says M. Bergson, "is subject to mathematical necessity; but with the coming of life we see the appearance of indetermination. A living being, no matter how simple, is a reservoir of indetermination and unforeseeability, a reservoir of possible actions, or, in a word, of *choice*. And in it, too, we find that faculty of imagining future eventualities (or, speaking more generally, of anticipating the future), and at the same time of storing up the past for that purpose, which is the faculty of consciousness."

No differences arise between the authors on this latter contention. They both agree practically as to freedom; but a divergence begins with respect to the ideas of ultimate aim and of control by the future—the question of teleology and far-reaching design. Mr. Balfour says that M. Bergson

"objects to teleology only less than to mechanical determinism. And, if I understand him aright, the vital impulse has no goal more definite than that of acquiring an ever-fuller volume of free creative activity."

Well, but that is a good enough goal, a real end in view, a sufficiently controlling and stimulating

impulse. Is it not the goal of every great artist? The teleology suggested by Mr. Balfour's simile of a river is an external teleology—control by external forces. Although said to "press ever towards the sea," a river is not really making "free endeavour" towards a goal, it is merely driven by the slope of its bed along a permanent channel to a fixed destination: while a flood or an eruption of lava takes the path of least resistance with no aim at all. But M. Bergson is appealing for what may be called an immanent teleology; and the simile he employs, for something working in the dark yet not without ultimate aim, is a tunnel:—

"the image of a current of consciousness which flows down into matter as into a tunnel, which endeavours to advance, which makes efforts on every side, thus digging galleries, most of which are stopped by a rock that is too hard, but which, in one direction at least, prove possible to follow to the end, and break out into the light once more."

Why should it do this? asks Mr. Balfour, why should consciousness immerse itself in matter? Why have anything to do with matter? Well, let us consider what it is that consciousness is

striving for. If it be thought that its aim is to inoculate matter with its own freedom, and that it is smitten with failure in so far as "a huge mass of matter remains what it has always been—the undisputed realm of lifeless determinism"—an entire misunderstanding is exhibited. The aim of life and consciousness is self-development, not the development of matter; the aim is to bring into full activity every fibre of our being. "Never, most equal sisters," writes Ben Jonson in his dedication of *Volpone* to the two Universities, "had any man a wit so presently excellent as that it could raise itself; but there must come both matter, occasion, commenders, and favourers to it." Matter is a means to that end; it is used in the process and discarded, and remains as it was before.

Matter has provoked effort and rendered it possible. Force cannot be exerted where there is no resistance; you cannot give a violent push to a floating feather. The fruitless violence of "missing the globe" is a familiar and wasteful expenditure of energy in a well-known game. The ball must obstruct the club to just the right amount in order to yield any satisfaction to the player.

So the very inertia and obstructiveness of mat-

ter, the resistances which it offers to the realization of ideals, contribute to the development of incarnate consciousness, and enable it to rise in the scale of existence.

"The thought which is only thought, the work of art which is only in the conceptual state, the poem which is only a dream, costs as yet no effort: what requires an effort is the material realization of the poem in words, of the artistic conception in a statue or a picture. This effort is painful, it may be very painful; and yet, whilst making it, we feel that it is as precious as, and perhaps more precious than, the work it results in; because, thanks to it, we have drawn from ourselves not only all that was there, but more than was there: we have raised ourselves above ourselves."

That is the aim of the whole process, and that is how matter, by its very inertness, can contribute to the result; its very necessity makes of organized matter an instrument of liberty; and the fact that there has been a real aim all the time is proved by the sense of joy which follows its accomplishment. And surely joy is felt also during the effort, and is an indication of right progress and good work.

Values must truly be taken into account, as

Mr. Balfour says, but such efforts are surely not aimless. There is no ignorance or uncertainty as to the desired goal, though there is contingency as to its being reached in any attempted direction; and there is always a danger lest the current of consciousness shall be ensnared by association with matter, enfolded and converted to its own automatism, as M. Bergson expresses it, and lulled into its own unconsciousness. In the vegetable kingdom this has happened, and in the animal kingdom there is constant risk of like degeneration. Hence genuine anxiety may be felt by Higher Powers, and constant help given from instant to instant, in the effort to shape our rough-hewn ends and carry out as far as possible a preconceived plan. Absence of complete predestination is not the same as absence of plan; a *desired* goal is not identical with a *destined* goal—a chess player is in no doubt on that score; and moderate and interesting and stimulating contingency is quite consistent with pursuit of a longed-for and eagerly expected end. "Journeys end in lovers meeting," but there may be many accidents by the way.

Complete Indifference as to final result would be irrational and absurd, and cannot be admitted

for a moment by any creatures who have risen to the knowledge of what foresight and love and benevolence are. On the other hand, complete passive Security as to result would likewise savour too much of mere inert mechanism, and would be quite inconsistent with the spirit and meaning of life. We must surely feel that the whole is striving together towards some end. Organisms are known to help each other—mother-love is a blessed reality—why should we draw a line and exclude such attributes from the heights of existence?

There is plenty of room for guidance, amid the laws of physics; and the effort need not be a blind effort, save perhaps to the particular organism which is struggling with its difficulties and finding that its best course is to do the duty nearest and have faith. Supervision and assistance may be realities, and yet the struggle may be a real one, involving uncertainty as to measure of success, and real risk of failure. The path to be followed need not be laid down like a line of rails, nor need the precise form of the destination be pre-determined.

Evolutionary progress is not like a river-bed, flowing in a predestined channel; nor is it like the

march of the land-crabs in inexorable straight lines over and through every obstacle and danger; no, but it is like an Anabasis. Each marching day so many *parasangs,* so many *stadia,* halts of given duration by the way, natives questioned, hostilities avoided, difficulties overcome; and at length the sea which washes the shores of the homeland is sighted, with the bursting forth of shouts of joy.

To maintain a rational conception of teleology, M. Bergson warns us, we must beware the analogy of mechanical construction to a design. The "artificer" notion must be got rid of, not only as regards the workshop, but as regards the drawing-office. The real kind of teleology is difficult to conceive, and we may often overpress an analogy. Very likely! Why should it not be difficult for us to understand the mode of working of higher intelligence? We are constitutionally hampered by our purely mobile conception of power and activity. We ourselves are limited to movement of objects; so far as the external world is concerned, we put things together and trust to their inherent properties; but Life is working the inherent properties themselves. We place an egg in an incubator and a chicken results. Nature or

life works in a totally different way from us: it does not directly *move* things at all, though it may cause them to move each other, and it achieves portentous results.

We perceive this best in cases of instinct, or of such unconscious processes as those to which we owe the growth and sustenance of our own bodies. It is easy to illustrate the futility of intelligence as compared with the unconscious activity of an organism. When we seek to do things by our brain and muscle alone, how limited our scope, how helpless we are; how much more powerful is our instinct—instinct of all grades, rising to the instinct of genius! Compare the futility of a dog's parlour-tricks with the superhuman skill of a sheep-dog or a bloodhound, yes, or a carrier pigeon. So it is with all our highest functions—the best of them are semiconsciously performed. Who, by taking thought, can write a great poem or paint a great picture if the gift is not born in him? To manufacture a new human being is an impossible task; but hand the problem over to life, and it is absurdly easy. And even our most intellectual senses—how saturated they are with instinct! Take vision. The retina has a pattern of ether-tremors focussed upon its rods and

cones, and from the distribution of that mosaic of sensation a whole landscape is perceived—it cannot be said to be "inferred." Ordinary sight is not an affair of intellect, any more than the intellect of the newly-hatched chick enables it to descry and peck at a seed. We are still far more dependent on intuition than on reason.

The subliminal super-consciousness, to which in our highest state we attain access, is not to be confused with the dull narcotic influence of matter. The rapt inspired mood of the poet is furthest removed from enslavement by matter, and the unconsciousness to material surroundings thus experienced is "utter clearness" of pure thought,

> "and thro' loss of Self
> The gain of such large life as match'd with ours
> Were Sun to spark."

Is there not more fundamental Freedom, also, about instinct than about intelligence? Birds are proverbially free, but so are most animals—even insects. Few working men are as free as the working bee. It can take up its work at any stage, and pass from one cell to another doing a little job at each. If no wax is provided it sets to work to make some. If wax is supplied it begins by moulding it. If it is partially moulded or

stamped out into incipient cells, it draws out the walls and completes them. If ready-made cells are introduced into a hive, the bee saves all this preliminary labour and begins to fill them, gathering its honey from where it will.

Yet there is clearly an aim in all this, and life is always subject to its own laws. There is a controlling entity in a seed whereby the same product results, no matter amid what surroundings. If an acorn can grow at all, an oak results.

There is thus a "finalism" even about life, but it is not Leibnitzian finalism, it is not "radical finalism," as Bergson calls it. That was the kind of teleology to which he was objecting, not the kind for which Mr. Balfour is pleading, and which I feel reasonably sure M. Bergson would heartily concede. If not, we shall hear in due time: and of course he is not responsible for any misrepresentation or modification of his meaning, which I may have occasionally assumed to be more like my own than it is. [M. Bergson has written approving my presentation of his views, in general terms.]

It is the trace of mechanism lingering in mechanical finalism that Bergson objects to. Both mechanism and finalism are standpoints, so he

contends, to which the human mind has been led by considering the work of men. We must get beyond both points of view. A workman, he says,

"proceeds by the assemblage of parts, with a view to the realization of an idea or the imitation of a model. Mechanism, here, reproaches finalism with its anthropomorphic character and rightly. But it fails to see that itself proceeds according to this method—somewhat mutilated! True, it has got rid of the end pursued or the ideal model. But it also holds that nature has worked like a human being by bringing parts together, while a mere glance at the development of an embryo shows that life goes to work in a very different way. *Life does not proceed by the association and addition of elements, but by dissociation and division.*"

The universe, as we perceive it, does not set to work after our conscious manner and put things together to a design—no; but that is no adequate reason for denying an aim, a super-consciousness, and an ultimate goal.

Yet, though there must be a plan, it is a plan impossible to formulate; for

"Evolution creates, as it goes on, not only the forms of life, but the ideas that will enable the intellect to understand it, the terms which will serve to express it. Its future, therefore, overflows its present, and

cannot be sketched out therein in idea."—(*Creative Evolution,* p. 108).

Whether the ancient appearance of inconsistency between freedom and foreknowledge can thus be removed, whether sequence and duration can ever be resolved by some lofty apotheosis into an equivalent simultaneity, whether complete and absolute foreknowledge—based on thorough acquaintance with the character of every creature at every instant—can be evaded, or need be evaded, by relegating such ultimate perception solely to an existence so high as to be inconceivable—far above the proximate agents and controllers of this present scheme—all this is more than doubtful; but, for my own part, I am impressed with two things —first, with the reality and activity of powerful but not almighty helpers, to whom in some direct and proximate sense we owe guidance and management and reasonable control; and next, with the fearful majesty of still higher aspects of the universe, culminating in an immanent Unity which transcends our utmost possibility of thought.

IV

HUXLEY ON MAN'S PLACE IN NATURE[1]

FORTY years ago the position of scientific studies was not so firmly established as it is to-day, and a conflict was necessary to secure their general recognition. The forces of obscurantism and of free and easy dogmatism were arrayed against them; and, just as in former centuries astronomy, and in more recent times geology, so in our own lifetime biology, has had to offer a harsh and fighting front, lest its progress be impeded by the hostility born of preconceived opinions, and by the bigotry of self-appointed guardians of conservative views.

The man who probably did as much as any to fight the battle of science in the nineteenth century, and secure the victory for free inquiry and progressive knowledge, is Thomas Henry Huxley; and it is an interesting fact that already the

[1] An Introduction to a volume in Dent's Library.

lapse of time is making it possible to bring his writings in cheap form to the notice of a multitude of interested readers. The pugnacious attitude, however, which, forty years ago, was appropriate, has become a little antique now; the conflict is not indeed over, but it has either totally shifted its ground, or is continued on the old battlefield chiefly by survivors, and by a few complacent zealots of a younger generation who have been brought up in the old spirit.

The truths of materialism now run but little risk of being denied or ignored, they run perhaps some danger of being exaggerated. Brilliantly true and successful in their own territory, they are occasionally pushed by enthusiastic disciples over the frontier line into regions where they can do nothing but break down. As if enthusiastic worshippers of motor-cars, proud of their performance on the good roads of France, should take them over into the Sahara or essay them on a Polar expedition.

That represents the mistake which, in modern times, by careless thinkers, is being made. They tend to press the materialistic statements and scientific doctrines of a great man like Huxley, as if they were co-extensive with all existence.

This is not really a widening of the materialistic aspect of things, it is a cramping of everything else; it is an attempt to limit the universe to one of its aspects.

But the mistake is not made solely, nor even chiefly, by those eager disciples who are pursuing the delusive gleam of a materialistic philosophy—for these there is hope; to attempt is a healthy exercise, and they will find out their mistake in time; but the mistake is also made by those who are specially impressed with the spiritual side of things, who so delight to see guidance and management everywhere, that they wish to blind their eyes to the very mechanism whereby it is accomplished. They think that those who point out and earnestly study the mechanism are undermining the foundations of faith. Nothing of the kind. A traveller in the deck-cabin of an Atlantic liner may prefer to ignore the engines and the firemen, and all the machinery and toil which is urging him luxuriously forward over the waves in the sunshine; he may try to imagine that he is on a sailing vessel propelled by the free air of heaven alone; but there is just as much utilization of natural forces to a desired end in one case of navigation as in the other, and every detail of the steam-

ship, down to the last drop of sweat from a fireman's grimy body, is an undeniable reality.

There are people who still resent the conclusions of biology as to man's place in nature, and try to counteract them; but, as the late Professor Ritchie said (*Philosophical Studies,* p. 24):—

"It is a mistake, which has constantly been made in the past by those who are anxious for the spiritual interests of man, to interfere with the changes which are going on in scientific conceptions. Such interference has always ended in the defeat of the supporters of the quasi-scientific doctrines which the growing science of the time has discarded. Theology interfered with Galileo, and gained nothing in the end by its interference. Astronomy, geology, biology, anthropology, historical criticism, have at different periods raised alarm in the minds of those who dread a materialistic view of man's nature; and with the very best intentions they have tried to fight the supposed enemy on his own ground, eagerly welcoming, for instance, every sign of disagreement between Darwinians and Lamarckians, or every dispute between different schools of historical critics, as if the spiritual well-being of mankind were bound up with the scientific beliefs of the seventeenth, or even earlier, century, as if *e.g.* it made all the difference in man's spiritual nature whether he was made directly out of inorganic

dust or slowly ascended from lower organic forms. These are questions that must be settled by specialists. On the other hand, philosophic criticism is in place when the scientific specialist begins to dogmatize about the universe as a whole, when he speaks, for example, as if an accurate narrative of the various steps by which the lower forms of life have passed into the higher was a sufficient explanation to us of the mystery of existence."

Let it be understood, therefore, that science is one thing, and philosophy another: that science most properly concerns itself with matter and motion, and reduces phenomena, as far as it can, to mechanism. The more successfully it does that, the more it fulfils its end and aim. But when, on the strength of that achievement, it seeks to blossom into a philosophy, when it endeavours to conclude that its scope is complete and all-inclusive, that nothing exists in the universe but mechanism, and that the aspect of things from a scientific point of view is their only aspect,—then it is becoming narrow and bigoted and deserving of rebuke. Such rebuke it received from Huxley, such rebuke it will always receive from scientific men who realize properly the magnitude of existence and the vast potentialities of the universe.

Our opportunities of exploration are good as far as they go, but they are not extensive; we live as it were in the mortar of one of the stones of St. Paul's Cathedral; and yet so assiduously have we cultivated our faculties that we can trace something of the outline of the whole design and have begun to realize the plan of the building—a surprising feat for insects of limited faculty. And —continuing the parable—two schools of thought have arisen: one saying that it was conceived in the mind of an architect and designed and built wholly by him, the other saying that it was put together stone by stone in accordance with the laws of mechanics and physics. Both statements are true; and those that emphasize the latter are not thereby denying the existence of Christopher Wren, though to the unwise enthusiasts on the side of design they may appear to be doing so. Each side is stating a truth, but neither side is stating the whole truth. Nor should we find it easy with all our efforts to state the whole truth exhaustively, even about such a thing as that. Those who deny any side of truth are to that extent unbelievers, and Huxley was righteously indignant with those short-sighted bigots who blasphemed against that aspect of divine truth

which had been specially revealed to him. This is what he lived to preach, and to this he was faithful to the uttermost.

Let him be thought of as a devotee of truth, and a student of the more materialistic side of things, but never let him be thought of as a philosophical materialist or as one who abounded in cheap negations.

The objection which it is necessary to express concerning Materialism as a complete system is based not on its assertions but on its negations. In so far as it makes positive assertions, embodying the result of scientific discovery and even of scientific speculation based thereupon, there is no fault to find with it; but when, on the strength of that, it sets up to be a philosophy of the universe—all inclusive, therefore, and shutting out a number of truths otherwise perceived, or which appeal to other faculties, or which are equally true and are not really contradictory of legitimately materialistic statements—then it is that its insufficiency and narrowness have to be displayed. As Professor Ritchie said: "The 'legitimate materialism of the sciences' simply means temporary and convenient abstraction from the cognitive conditions under which there are 'facts' or 'objects' for us at all;

it is 'dogmatic materialism' which is metaphysics of the bad sort."

It will be probably instructive and it may be sufficient, if I show that two great leaders in scientific thought (one the greatest of all men of science who have yet lived), though well aware of much that could be said positively on the materialistic side, and very willing to admit or even to extend the province of science or exact knowledge to the uttermost, yet were very far from being philosophic materialists or from imagining that other modes of regarding the universe were thereby excluded.

Great leaders of thought, in fact, are not accustomed to take a narrow view of existence, or to suppose that one mode of regarding it, or one set of formulæ expressing it, can possibly be sufficient and complete. Even a sheet of paper has two sides: a terrestrial globe presents different aspects from different points of view; a crystal has a variety of facets; and the totality of existence is not likely to be more simple than any of these—is not likely to be readily expressible in any form of words, or to be thoroughly conceivable by any human mind.

It may be well to remember that Sir Isaac New-

ton was a Theist of the most pronounced and thorough conviction, although he had a great deal to do with the reduction of the major Cosmos to mechanics, *i.e.* with its explanation by the elaborated machinery of simple forces; and he conceived it possible that, in the progress of science, this process of reduction to mechanics would continue till it embraced nearly all the phenomena of nature. (See extract below.) That, indeed, has been the effort of science ever since, and therein lies the legitimate basis for materialistic statements, though not for a materialistic philosophy.

The following sound remarks concerning Newton are taken from Huxley's *Hume,* page 246:—

"Newton demonstrated all the host of heaven to be but the elements of a vast mechanism, regulated by the same laws as those which express the falling of a stone to the ground. There is a passage in the preface to the first edition of the *Principia* which shows that Newton was penetrated, as completely as Descartes, with the belief that all the phenomena of nature are expressible in terms of matter and motion:—

" 'Would that the rest of the phenomena of nature could be deduced by a like kind of reasoning from mechanical principles. For many circumstances lead me to suspect that all these phenomena may depend

upon certain forces, in virtue of which the particles of bodies, by causes not yet known, are either mutually impelled against one another, and cohere into regular figures, or repel and recede from one another; which forces being unknown, philosophers have as yet explored nature in vain. But I hope that, either by this method of philosophizing, or by some other and better, the principles here laid down may throw some light upon the matter.' "—Extract from Newton's *Principia*.

Here is a full-blown anticipation of an intelligible exposition of the universe in terms of matter and force—the substantial basis of what smaller men call materialism and develop into what they consider to be a materialistic philosophy. But for this latter scheme there is no justification; and Professor Huxley himself, who is commonly spoken of by half-informed people as if he were a philosophic materialist, was really nothing of the kind; for although, like Newton, fully imbued with the mechanical doctrine, and of course far better informed concerning the biological departments of nature, and the discoveries which have in the last century been made,—and though he rightly regarded it as his mission to make the scientific point of view clear to his benighted contemporaries, and was full of enthu-

siasm for the facts on which materialists take their stand,—he saw clearly that these alone were insufficient for a philosophy. The following extracts from the Hume volume will show that he entirely repudiated materialism as a satisfactory or complete philosophical system, and that he was especially severe on gratuitous denials applied to provinces beyond our scope:—

"While it is the summit of human wisdom to learn the limit of our faculties, it may be wise to recollect that we have no more right to make denials, than to put forth affirmatives, about what lies beyond that limit. Whether either mind or matter has a 'substance' or not, is a problem which we are incompetent to discuss: and it is just as likely that the common notions upon the subject should be correct as any others. . . . 'The same principles which, at first view, lead to scepticism, pursued to a certain point, bring men back to common sense' " (p. 282).

"Moreover, the ultimate forms of existence which we distinguish in our little speck of the universe are, possibly, only two out of infinite varieties of existence, not only analogous to matter and analogous to mind, but of kinds which we are not competent so much as to conceive,—in the midst of which, indeed, we might be set down, with no more notion of what was about

us, than the worm in a flower-pot, on a London balcony, has of the life of the great city" (p. 286).

And again, on pages 251 and 279:—

"It is worth any amount of trouble to . . . know by one's own knowledge the great truth . . . that the honest and rigorous following up of argument which leads us to 'materialism' inevitably carries us beyond it."

"To sum up. If the materialist affirms that the universe and all its phenomena are resolvable into matter and motion, Berkeley replies, True; but what you call matter and motion are known to us only as forms of consciousness; their being is to be conceived or known; and the existence of a state of consciousness apart from a thinking mind is a contradiction in terms.

"I conceive that this reasoning is irrefragable. And therefore, if I were obliged to choose between absolute materialism and absolute idealism, I should feel compelled to accept the latter alternative."

Let the jubilant but uninstructed and comparatively ignorant amateur materialist therefore beware, and bethink himself twice or even thrice before he conceives that he understands the universe, and is competent to pour scorn upon the intui-

tions and perceptions of great men in what may be to him alien regions of thought and experience.

Let him explain, if he can, what he means by his own identity, or the identity of any thinking or living being, which at different times consists of a totally different set of material particles. Something there clearly is which confers personal identity and constitutes an individual: it is a property characteristic of every form of life, even the humblest; but it is not yet explained or understood, and it is no answer to assert gratuitously that there is some fundamental substance or material basis on which that identity depends, any more than it is an explanation to say that it depends upon a soul. These are all forms of words. As Hume says, quoted by Huxley with approval, in the work already cited, page 194:—

"It is impossible to attach any definite meaning to the word 'substance,' when employed for the hypothetical substratum of soul and matter. . . . If it be said that our personal identity requires the assumption of a substance which remains the same while the accidents of perception shift and change, the question arises, what is meant by personal identity? . . . A plant or an animal, in the course of its existence, from the condition of an egg or seed to the end of life, re-

mains the same neither in form, nor in structure, nor in the matter of which it is composed: every attribute it possesses is constantly changing, and yet we say that it is always one and the same individual" (p. 197).

And in his own preface to the Hume volume Huxley expresses himself forcibly thus—equally antagonistic as was his wont to both ostensible friend and ostensible foe, as soon as they got off what he considered the straight path:—

"That which it may be well for us not to forget is, that the first-recorded judicial murder of a scientific thinker [Socrates] was compassed and effected, not by a despot, nor by priests, but was brought about by eloquent demagogues. . . . Clear knowledge of what one does not know is just as important as knowing what one does know. . . .

"The development of exact natural knowledge in all its vast range, from physics to history and criticism, is the consequence of the working out, in this province, of the resolution to 'take nothing for truth without clear knowledge that it is such'; to consider all beliefs open to criticism; to regard the value of authority as neither greater nor less than as much as it can prove itself to be worth. The modern spirit is not the spirit 'which always denies,' delighting only

in destruction; still less is it that which builds castles in the air rather than not construct; it is that spirit which works and will work 'without haste and without rest,' gathering harvest after harvest of truth into its barns, and devouring error with unquenchable fire" (p. viii.).

The harvesting of truth is a fairly safe operation, for if some falsehood be inadvertently harvested along with the grain we may hope that, having a less robust and hardy nature, it will before long be detected by its decaying odour; but the rooting up and devouring of error with unquenchable fire is a more dangerous enterprise, inasmuch as flames are apt to spread beyond our control; and the lack of infallibility in the selection of error may to future generations become painfully apparent. The phrase represents a good healthy energetic mood, however, and in a world liable to become overgrown with weeds and choked with refuse, the cleansing work of a firebrand may from time to time be a necessity, in order that the free wind of heaven and the sunlight may once more reach the fertilized soil.

But it is unfair to think of Huxley even when young as a firebrand, though it is true that he was to some extent a man of war, and though the fierce

and consuming mood is rather more prominent in his early writings than in his later work. A fighting attitude was inevitable forty years ago, because then the truths of biology were being received with hostility, and the free science and philosophy of a later time seemed likely to have a poor chance of life. But the world has changed or is changing now, the wholesome influences of fire have done their work, and it would be a rather barbarous anachronism to apply the same agency among the young green shoots of healthy learning which are springing up in the cleared ground.

V.

THE POSITION OF WOMEN IN THE STATE [1]

An effort towards widening the scope and political and professional importance of women has been a leading feature of the quiet revolution that has been going on for the past half century.

Early memories can recall episodes characteristic of the low estimate of women's intelligence and public spirit formed by average people, and some of us can also recall memories of the resentment felt and expressed by women of ability and latent power at the occurrence of such episodes. Improvement was inevitable; and already a great deal has been accomplished. The tone of the youthful male is no longer so offensive and patronizing as it used to be; and the eminence to which women have attained in certain fields of work is recognized by all. The advance is likely to continue, for there is still much room for

[1] Partly from a Preface to a volume of collected Addresses on the subject.

improvement, though the unwisdom of some of its less eminent but specially energetic supporters seems likely to cause a premature reaction.

Sooner or later, however, a reaction is bound to come, and it behoves all who wish the movement well to pause and consider from time to time what it is that they really wish achieved, what it is that can be permanently retained in accordance with the fullest appreciation of natural fact, and when and in what direction the movement is becoming lawless and in need of curb. By such consideration it may be possible to diminish the tendency which all enthusiastically supported movements exhibit to run into extravagance in certain directions; whereby a protective swing of equal unwisdom and perhaps greater deleteriousness is liable to occur in the opposite direction;—of greater deleteriousness, in all probability, because like all reactionary movements it is loaded with the inertia of ancestral prejudice. Such dangers can only be avoided by wisdom and knowledge and foresight. To rush blindly on without regard to past history and racial experience, and heedless of dangers ahead, is fanatical rather than heroic; it is to imitate the activity of the runaway horse which

brings itself and all connected with it to destruction.

An attempt, therefore, coolly and dispassionately to survey the general position, to discuss the rational claims which can be made, the admitted diversities which must be recognized, and the historical and scientific aspect of the whole question, is called for in the name of common sense, both by those who think the movement has already gone far enough and by those who wish it to go further.

People who sympathize largely with the latter group may yet recognize certain dangers and defects in the system of training at present in vogue, and may doubt whether as a preparation for life it is the best that can be given. Every one must realize that women can perform a service to the State more vital, more arduous, and therefore more honourable, than any other; many believe that their instincts would lead the majority of women to fulfil this duty adequately and responsibly and heartily, if the State were wise enough to free them and educate them for its due accomplishment; and some are impressed with the conviction that a right understanding of the laws of heredity, the management of in-

fancy, and the judicious training of childhood, would have a more direct and beneficent influence on the future of the human race than any other reform that is within reach of accomplishment.

But the whole subject is a large and difficult one, and is full of problems which cannot be solved by the intellect alone. To coerce sane people into arrangements made in accordance with statistical and medical advice alone is quite impracticable, and would lead to furious revolt. Besides, even if practicable, the attempt would be unwise; Love is a spirit which rises superior to human understanding, and in its majesty affords a surer and diviner guide than any law or system. The spirit can appear in many disguises,—strict justice, public service, organizing energy, social work, among others,—and can assume unexpected shapes; already it achieves more than is generally recognized, it must ultimately dominate all human activity; and when the affairs of the world are really controlled in harmony with the spirit of Love the millennium will have come.

Meanwhile the great essential to all sound development, among creatures endowed with will and purpose and self-control, is freedom—freedom to choose a career, freedom to impose self-

restrictions, freedom to plan and to act—such legitimate and balanced freedom, subject to full civic responsibility, as was pleaded for by John Stuart Mill; such removal of external restraints and artificial disabilities from women as is now seriously demanded and cannot long be withheld.

So far all may be fairly agreed, but many are prepared to go further. Everyone must recognize the splendid work which has been done by women in social and educational fields: and it will, I believe, come more and more to be recognized that in some respects women are specially fitted for government and for official and municipal life. In the highest Office in the kingdom a woman has proved pre-eminent, and it is absurd to adduce disabilities and disqualifications in the face of that and other only less brilliant examples. We should always mistrust artificial and arbitrary disqualifications. The simpler and freer our arrangements can be, the better, and it is a highly artificial disqualification to disfranchise property because it is owned or occupied by a woman. So long as property votes, so long as there is a franchise due to ownership or occupation of land or house, so long the owner or responsible occupier should exercise the right, quite irrespective of sex

or of whether married or single, or of any other question not recognized by law as disqualifying from full ownership. All such questions are merely impertinent—that is to say, beside the mark. The vote itself is a trivial affair, but its artificial withholding is a gratuitous insult: we need not be surprised that the arbitrary withholding of that small function is one that galls out of all proportion to its importance. Let us recognize the desirability of doing away with artificial obstacles, and giving to everyone a clear field and an equal chance—a fair share in education, an open entrance to the professions, and a fair and reasonable opportunity of service in every direction. For it is a wholesome feature of the times that opportunities for public service are what are being contended for; these are the privileges now most craved, and it is a sign of high civilization that it should be so. By the self-sacrificing efforts of many noble women those rights of service have been at length largely conceded, the opportunity most recently granted being membership of county and borough councils. Ratepayers are now no longer prevented from returning whom they will to manage their affairs. The progress made towards the freedom and recognition of

women's public work during the last fifty years has been prodigious: and their service to the community in a direction of home rule or local administration will surely prove of great importance. The future development of local self-government will prove the salvation of England, if England is to be saved:—it could not go on much longer as it has placidly been going on of late. The administrative councils of counties, and soon, I hope, the Senates of greater districts or Provinces, will become dignified bodies of supreme capacity for the control of local business; thereby liberating Imperial Parliament for the attractive, but after all less vital and less pressing, problems of Imperial federation and management of half the world. Less vital and less pressing, because a nation cannot hope to continue that high mission unless it is able to set its own house in order and manage its own affairs in such a way as to satisfy the heart and conscience of its best and most intelligent citizens.

such s.- - !

What drivel – whata dope –
look on page 1

VI

THE RESPONSIBILITY OF AUTHORS [1]

A WORK of literature is a real work of creation. Authors must often have felt that their characters had a will of their own, that they would not always do what was expected of them, that they took the bit between their teeth sometimes, that they were not puppets. Persons in a book or drama ought not to be puppets, and should not be "put back in the box"; nor must they be forcibly coerced by their creator to a predestined end independent of their character and conduct. If they have been properly created they have a real existence of their own, an existence for which the author is responsible, and a certain amount of free will and independence of action.

Coercion to a predestined end is bad art. If that statement is true it is important. It affects the doctrine of predestination. A good work of

[1] An Address to the Society of Authors in 1909 in special connection with a proposed Library censorship, whereby, if any three Librarians agreed that a book in course of publication was undesirable, it would be forbidden at all circulating libraries.

art throws light on many problems of existence. For instance, the old and fundamental question, "Why is there any pain and sorrow in the world?" can be answered from this point of view. For it is a familiar fact that pain and sorrow are not kept out of a work of art designed and created by man. Why not? Why make trouble and pain artificially, over and above what inevitably exists? Because they are felt to be necessary, because they serve a useful end; they rescue existence from insipidity, they furnish scope for the exercise of human functions,—their endurance is justified, and felt to be "worth while."

King Lear, for instance, is a work of pain and sorrow and beauty. To achieve the beauty the pain was necessary, and its creator thought it worth while. He would not have it otherwise, nor would we. So it is in real life. Creation is "good," even "very good," but not perfect. We are still living amid imperfections; there is always room for improvement. Why is there any imperfection? Because without it evolution and progress, of the high kind which we are privileged to take part in, could not go on. Creation of free and responsible beings, who go right not by compulsion but because they choose, who move

forward not because they *must* but because they *will*, cannot be an easy task—may we not venture to say that it must be a strenuous task?—even to Omnipotence. Every worthy achievement demands certain conditions; and one of those conditions is toil and effort. The effort of Creation is surely a real effort. Difficulty is a necessary sequel to the gift of Freedom.

The construction of the physical universe, the interlocking of atoms and ether that we study in the material sciences, is beautiful and wonderful in the extreme; but it is all a kind of intricate, and high-grade machinery—perfectly obedient, strictly under control, never rebellious. So, though vastly beyond and above mechanism arranged by man, it is not hopelessly and unthinkably of a different kind,—saving always for the unthinkable problem of existence itself. But with the introduction of life and mind and will, difficulties of a superlatively higher order begin. The possibility of things going wrong, not through oversight but through active mutiny and rebellion, the possibility of real *vice*, can no longer be ignored. Compulsion might be easy, but the introduction of compulsion would be a breaking of the rules—an abandonment of the problem.

The state of the world is surely as good as it has been possible to make it—given the conditions, —and exhibits infinitely more promise for the future than any mechanically perfect system could sustain; else it were blasphemy to say that there was ever imperfection, else the struggle for existence were a fiction and a sham.

There is undoubtedly a struggle, but there is also much joy,—the joy of achievement sometimes, the joy of preparation always. The joy of achieved existence manifests itself in beauty. Life is pressing forward amid troubles and trials, pressing forward to realize itself, to blossom and bud like a briar among ruins, even amid hardship and decay;—because—because existence is worth its price. Seen in this light the present pain and sorrow lend themselves to Optimism. How splendid must the future of the race be, if all this trouble and all the millions of years of preparation that science tells us of, were needed as its prelude! Each step is presumably essential, as it is in a good work of art. Nothing is there wasted—each word, each scene, each act, *tells*. So I assume it to be with real existence; each step, however painful it may be, is an essential part of the whole.

So an extraordinary responsibility belongs to the artists of the pen. They represent the truth of the present age to itself and to the future: and not only do they represent it, they also prepare the way and to some extent determine what the future shall be. The influence exerted on the living generation by those writers who have its ear, and to whom it listens, must be incalculable. No wonder that an effort is made from time to time to check and control the distribution of the works produced. People of very different ages exist in the world, and not everything is wholesome at every age. Vicious people also exist, and it behoves parents and guardians to exercise some supervision—as much as they may think wise.

Nevertheless, freedom is essential to literature and the other arts; and their essential freedom must not be jeopardized because of some slatternly and opprobrious stuff which presumes to masquerade under a sacred title. Everything on earth can be misused, and the divinest gift can be prostituted; parents and guardians may properly feel responsibility, but they must not attempt to shift it to the shoulders of others. The danger may easily be exaggerated; and, whatever the danger, it gives no justification for a hasty trade-

sifting process applied to works issued by reputable publishing houses and to the writings of sane and responsible authors. Coddling of that kind, even if practicable, would defeat its own end. Youth cannot be isolated and kept sound and sweet by means such as these. A robust is better than an anæmic virtue; and, from the Garden of Eden downwards, though a warning is issued against forbidden fruit, the tree on which it grows is not the tree which by decree of Providence is made impossible of access.

The gentlemen who own circulating libraries have realized what they think is *their* responsibility in this matter, and they very properly decline to circulate anything they think vicious —they desire to issue only good literature; but unfortunately the outcome of this wholesome desire has taken the impracticable form of a scheme for hasty amateur censorship of literary production generally. Such a scheme must be futile. A censorship of the Press by the State—if an attempt were made to reintroduce that—might indeed be a serious thing, against which it would be necessary to invoke the shade of Milton and to quote the *Areopagitica*. Indeed, the utterances of that mighty artist—who must be credited

with a sympathetic attitude to all that is reasonable in the Puritan position—are so germane to the supposed need for censorship generally, that I shall not refrain from a few extracts:—

"For though licensers should happen to be judicious more than ordinary, which will be a great jeopardy of the next succession, yet their very office . . . enjoins them to let pass nothing but what is vulgarly received already. . . .

"If there be found in his book one sentence of a venturous edge, uttered in the height of zeal (and who knows whether it might not be the dictate of a divine spirit?), yet, not suiting with every low decrepit humour of their own, though it were Knox himself, the reformer of a kingdom, that spake it, they will not pardon him their dash; the sense of that great man shall to all posterity be lost, for the fearfulness, or the presumptuous rashness of a perfunctory licenser. . .

". . . Wisdom we cannot call it, because it stops but one breach of licence—nor that neither: whenas those corruptions which it seeks to prevent, break in faster at other doors, which cannot be shut. . . . I cannot praise a fugitive and cloistered virtue. . . .

"We should be wary, therefore, what persecution we raise against the living labours of public men, how we spill that seasoned life of man, preserved and stored

up in books; since we see a kind of homicide may be thus committed, sometimes a martyrdom; and if it extend to the whole impression, a kind of massacre, whereof the execution ends not in the slaying of an elemental life, but strikes at the ethereal and fifth essence, the breath of reason itself; slays an immortality rather than a life."

Censorship of the Press was not slain by Milton's attack; it survived and presumably flourished during the productive era of the Restoration; but, its impotence having become manifest, it perished some fifty years after Milton's death.

Censorship of the drama, oddly enough, we are living under now; and though comic in its manner and execution it is yet serious in its effect and outcome. It has prevailed to stop some good work; it does not avail to stop the foolish and the bad, but it stops some of the good—that is what censorship always does—and a censorship by a combination of circulating librarians cannot hope to achieve anything better. It can perturb the freedom of production in the literature of to-day; but over the literature of yesterday no one imagines that it has any control. The writers of the past have the freedom which it is

proposed to deny to the writers of the present. Thus some good work has anyhow escaped destruction. There may be tares among the wheat —quite true—no doubt there are; but we have been warned against the danger of prematurely uprooting tares, lest we uproot the wheat also. It is safer to let both grow together. Fortunately the good has a longer life than the bad, and will survive and be full of influence long after the rubbish has retreated to its proper obscurity.

"But of the harm that may result hence . . . first is feared the infection that may spread; but then all human learning and controversy in religious points must remove out of the world, yea, the Bible itself."

If some now universally recognized works of literature—let us say if the classic novels of Henry Fielding—were to be brought out to-day, they would surely under the proposed arrangement be banned. As it is, they can be bought anywhere for a trifling sum. There was some outcry, I remember, about Kingsley's *Hypatia* —amazing as the fact sounds now. Yes, and *Adam Bede,* too, was objected to by some. In my youth *Jane Eyre* was a book half forbidden.

Here is part of a letter from Kingsley to

Bishop Wilberforce on the subject of *Hypatia,* so late as 1873:—

"Your letter, I say, touched me deeply, and all the more, because it came from one who had been a sailor. But your kind words about *Hypatia* touched me more than those about *Westward Ho!;* for the former book was written with my heart's blood, and was received, as I expected, with curses from many of the very Churchmen whom I was trying to warn and save. Yet I think the book did good. I know that it has not hurt me, save, perhaps, in that ecclesiastical career to which I have never aspired."

At a time much earlier, in 1851, when *Yeast* appeared, it was received with a torrent of hostile criticism, which though partly clerical and political, was damaging not only to a clergyman but to any reputable citizen. Here, for instance, is an extract from *The Guardian* of that date:—

"A man in the position of the author of *Alton Locke* (if he be the writer) commits a grave offence when he publishes such a book as this. Professing to aim at religious earnestness and high morality, its tendencies are really to the destruction of both. . . . It is the countenance the writer gives to the worst tendencies of the day, and the manner in which he conceals loose morality in a dress of high-sounding and philosophical

phraseology, which calls for plain and decided condemnation. . . . Doctrines, however consecrated by the faith of ages, practices, however recommended by the lives of saints, or the authority of wise and good men, are to be despised if they interfere with what he thinks the full development of our nature, tend to check the wildest speculations of the intellect, or even to restrain (if we understand the teaching of his character) the most entire indulgence of the passions."

And so on, with sentences in which the phrases "youthful profligacy," "selfish gratification," "impure philosophy," sufficiently exhibit the charges made.

Indeed, such was the agitation about Kingsley's conscientious utterances at that time that he was actually forbidden by the Bishop of London to preach in London, until the Bishop had had an opportunity of looking into the matter.

A poem of Clough's, too, seems to have been attacked; for we find Kingsley writing to a friend in the following strongly worded style in 1848:—

"As for Clough's poem. I am game to 'go in' fiercely against all Manicheans, Hermann-and-Dorothea-formalists, and other unclean beasts, to prove that Clough knows best what he wants to say, and how; and that taking the poem inductively, and not *à priori*

(as the world, the flesh, and the devil take works of art), there is a true honest harmony, and a genial life in it, as of a man who, seeing things as they were, and believing that God and not 'taste' or the devil settles things, was not ashamed to describe what he saw."

It is plain, then, that contemporary criticism may be mistaken, and that a hasty censorship may commit much injustice.

"But that a book, in worse condition than a peccant soul, should be to stand before a jury ere it be born to the world, and undergo yet in darkness the judgment of Rádamanth and his colleagues, ere it can pass the ferry backward into light, was never heard before."

As to the accusation of "blasphemy," we can comfort ourselves with the thought that the holiest saints in the past did not escape that. "The Christian faith—for that was once a schism!" The real adjective to apply in these cases is "unconventional"—contrary to accepted convention—if that is what is meant; then we should know where we were. But this adjective is not sufficiently strong and damaging to be injurious. It has even been regarded as semi-complimentary; consequently, when Mr. Bernard Shaw magnanimously wished to assist critics in

applying opprobrious epithets to his own plays, he suggested the use of the word "immoral" instead.

But such an application of this word would be merely misleading and most unwise. The significance of the term "unconventional" should be strengthened, till it conveyed what was intended. The conventions of society are quite useful things, the result of ages of experience, and any conduct or writing that runs counter to them must be prepared to stand the test of criticism and to justify itself thoroughly; but it should not be condemned unheard.

The importance and responsibility of free criticism, too, should be fully recognized; and the social ostracism which it can be the means of inflicting is the appropriate and legitimate penalty for needlessly or prematurely infringing the conventions of society. All good customs have their day, and in due time will cease to be. Premature attacks, like premature attacks in chess, are bound to fail. But, every now and then, attacks upon conventions must be made, and when the time is ripe will succeed. An open and aboveboard attack is far better than one that skulks in holes and corners, and it is best to permit things to be said when they are seriously thought. That

is why freedom of the Press is so necessary and valuable, not only as a reforming agency, but also as an outlet for malicious humours, which else might accumulate in the body politic and are better purged.

A writer or publisher who infringes the criminal law is rightly liable to severe penalties, and thereafter to restriction; but occasional abuses of this kind give no adequate ground for curtailment of legitimate freedom. Freedom is the noble and dangerous gift that has been bestowed upon the human race—the power of choice and full responsibility therefor. This responsibility already rests heavily on the shoulders of every artist, every writer. Upon him has been bestowed the gift of insight into life above his fellows. He can see what they see, but he can see it more clearly; he can see more and further than they can. He can not only see, he can say; he has the gift of utterance, and he is bound to utter what he seriously feels to be his message. There were times when he was threatened with the rack or the stake if he did not hold his tongue. The early scientific discoverers were suppressed in every possible manner. But the more they were suppressed, the more a great deal they published

it; and through their labors we have attained to our present large and beneficent freedom. With a great price our ancestors attained this freedom, but we were free-born. We are not going at the beginning of the twentieth century to lose this birthright, at the dictate of any three persons, however estimable, however well-meaning, however able they may be.

VII

UNIVERSAL ARBITRATION, AND HOW FAR IT IS POSSIBLE[1]

Now that Sir Edward Grey and Mr. Balfour have joined hands with President Taft in an effort towards the gradual attainment of universal peace, in the hope that ultimately civilization may be relieved of the growing intolerable burden caused by national fears and jealousies, it behoves all persons to bethink themselves whether they can in any small degree assist in this weighty business. Not only diplomatists and politicians are concerned, the man in the street has an influence too, and cannot be altogether disregarded; for if in any country a mania of mistrust and suspicion is engendered, or if any nation feels its honour seriously wounded by any proposal, the best-laid schemes of its rules are likely to be futile. It is as a man in the street, only, that in this matter I venture to claim a hearing.

[1] An article contributed to the *Westminster Gazette* in April 1911.

In cold blood, and in the light of sanity and reason, the settling of disputes by means of bodily violence is manifestly uncivilized and barbarous. Through these preparatory epochs our forefathers have gone, and we owe them a debt of gratitude for what was doubtless in their day a natural and praiseworthy and at any rate inevitable form of human activity. But now that we have entered upon an age of science, now that we realize human brotherhood, now that we recognize the age-long pathetic struggle of humanity towards something higher, now that we realize that we can help or hinder the process of evolution, now that all our sympathies are called out by the pain and suffering we see around—surely we would not wish to add to the labour or to increase the pain.

There are those who hold that the struggle for existence has not only been beneficent in the past, but that it must be encouraged to continue in the future. There is no need for encouragement, the struggle is hard enough anyhow, and human progress will be more assisted now by friendliness and mutual aid than by savage and ruthless destruction. The energy and ingenuity which have gone to construct engines adapted to destruction

—exceedingly well adapted, beautiful and complex structures of lavish excellence—would have sufficed to advance prodigiously the arts of peace. The nations are all linked together now, and what benefits one benefits all. So also what injures one injures all, and fratricidal warfare is not only cruel—it is suicidal. Every war between civilized nations is nowadays a civil war; they trade together, they explore nature together, they reap the fruits of the earth together, they visit each other and understand each other now, quite as freely as the different provinces of a single country did in the Middle Ages. Destroy or weaken one country of Europe, and all Europe suffers; nor Europe only, but the world.

There is no real "winning" in war. To suppose that other nations benefit by the downfall of one, is surely akin to the fallacy that the smashing of crockery is good for trade! If the destruction of beautiful and useful things, the result of human pains, is good for anything, that thing is thereby proved to be evil. And if a nation appears to benefit by a successful career of fratricidal warfare, then those benefits will in the long run prove to be dead-sea fruit. The world is so constructed that far-reaching happiness is

not attained by anything which is essentially evil; thistles do not produce figs.

Granting all this, what is the immediate outcome? Can a nation contribute to the securing of peace by disbanding its army, and proclaiming that henceforward under no conditions will it fight? Clearly not. No nation can act individually in this way, with any wisdom; any more than a man can dispense with locks and bolts, and leave his house open, until humanity in general is far more civilized. Mutual distrust and suspicion are far from a state of ideal perfection, but, until the human race has become the human family, full precautions are necessary.

It is not practical to announce that you will not hit back if attacked. On the contrary, in a just cause—if only we can be sure that it *is* a just cause—we shall do well to strike as hard as we can. Indeed, some of us have had an uneasy sense, not so much of the power, as of the occasional futility, of our splendid Navy—a futility not in the least due to the Navy itself. We have felt sometimes that we would like to interfere—as Cromwell and Milton did on behalf of the Waldenses—when helpless people were being attacked; and yet, apparently because no financial

interests were involved, we struck no blow—we did not even effectively threaten to strike one. Whether it was right or wrong to abstain when we did, or to fight when we did, we men in the street never really knew. Information in such matters is difficult to obtain. Strangely enough, it is but seldom that the verdict of history has been given in our favour; and that has made us uneasy. The outcome of all this differs with different people, but in my own case it may be summed up thus: by all means let us retain the power to act vigorously in the cause of justice, and then let it be known that we intend so to act; only let the justice of our cause be carefully and anxiously decided, and not left to the heat and ignorance and prejudice of the moment.

What, then, about arbitration? Can we agree to refer every cause to arbitration and abide by the result?

Here we enter on the citadel of the position; and here it behoves us to walk warily, with full knowledge of what we are doing and what we intend to do. On everything arbitrable surely we should arbitrate, so as to settle things humanly and judicially and not ferociously and blindly. Sooner or later civilized nations will agree to

that; and every effort that can be made to bring that time nearer—every effort like that which is now being made—should assuredly be strengthened to the utmost. But does this proposition cover the whole ground? As a man in the street it appears to me that it does not. There are certain things which no nation would consent to submit to arbitration, and before deciding on a universal arbitration treaty it would be well to face these things and make up our minds as to what the list of them includes.

On all such matters as Newfoundland fisheries and Alabama claims we have already shown a willingness to arbitrate. We are not likely to go back on an advance like that. It may be necessary to go to law with a friendly nation like America, I trust to goodness that it may never be necessary to go to war, on any issue that may ever crop up between us on the whole North-American Continent. And yet there may be some delicate matters to be discussed, some of those which the carelessness of our predecessors has left in a very unsatisfactory condition.

There is the boundary of the State of Maine, for instance, and the still worse and quite preposterous boundary cutting off the northern part

of British Columbia from the sea. If this does not raise bad blood between the citizens of friendly nations, much Christian virtue on both sides will be needed to keep it down. Still, those are matters on which arbitration is possible; and of the same kind will be those which may some day arise in connection with the Panama Canal. But suppose a difficulty arose with Mexico, and suppose some European Power were unwise enough to interfere, would the United States consent to arbitrate? Would it not say that it was a domestic affair which it must settle alone? I expect it would. Whether trouble will ever arise about one of the West Indies, or about the Philippines, we need not conjecture, but the developing continent of South America must contain a variety of difficult problems which, let us hope, may be all peaceably settled.

Coming nearer home—suppose some foreign nation interfered on behalf of Ireland and insisted on Home Rule. Should we be ready to submit that question to arbitration? I trow not. We may grant Home Rule or we may withhold it—that is not the question,—the question is, should we not regard it as a thing to be decided by ourselves alone, without foreign intervention, and

should we not be prepared to fight rather than submit such a matter to alien jurisdiction? Well, I don't know, but I expect we should.

Again—to make another absurd and only typical supposition—suppose our neighbouring friend and Ally were to put in a claim for the re-possession or management of Egypt, and asked us to arbitrate about it. I expect we should decline. And we are surely not the only nation which will have reserves of that general sort.

Pass, then, to the Mediterranean, where for my part I fully expect the next temptation to go to war may arise—a temptation which I earnestly trust may be strenuously resisted to the utmost, when the time comes—quite independently of whether a question can be submitted to arbitration or not. It may be a delicate matter to refer to, and probably a statesman could hardly do so with propriety; but no one attaches importance to the guesses and assumptions of an outsider. I venture to assume, therefore, as a matter of gratuitous hypothesis, that some day, when changes occur in the Austrian Empire, an effort will be made by Germany to secure a seaport on the Mediterranean—probably, let us say, on the Adriatic, since that part of the coast could be

united with Germany by a minimum of annexation; and Italian Tyrol could be bartered to Italy. Let us suppose that it is a matter of high German policy, of long standing, and quite beyond any question of arbitration. To such a proposal, what would be our attitude? We cannot pretend to be intelligent friends of Universal Peace unless we face it.

The German argument will be that such an outlet is needed in the interests of national expansion, that some of the North Coast of Africa is fallow for re-civilization, that German Colonial development is in progress, and that they have as much right to Colonies as ourselves. France and Italy may at first strongly object, but the German Navy may be sufficient to overawe them and carry the operation through peacefully, in spite of their protests, if they are unaided. That, in my judgment, is what the German Navy is for; nothing to do with the North Sea or a preposterous highway-robbery invasion of any country, *so long as it does not interfere.*

Let us suppose such a state of things, by way of hypothesis; for if this does not occur something else will, and we may as well look at the matter in cold blood beforehand, and not wait for the

passion of the moment. What will be our own attitude? The arguments on our side will be that we do not want another Power in the Mediterranean, that we have interests there, in Gibraltar and Malta and Cyprus, not to speak of Egypt; that it is our highway to India; and that at all costs the Colonial ambition of Germany so far as it affects the Mediterranean must be curbed.

That line of argument will undoubtedly be put forward. Is it a righteous one? It was tried before on Russia, and successfully applied: the Crimea was invaded, the Black Sea exit was blocked, and a great land-bound nation was practically excluded from our seas.

Is it legitimate thus to check the expansion and development of a nation? Is it wise? Has it lessened our anxiety? Have not the suppressed expanding instincts continually striven towards a maritime outlet somewhere else—Persia and India, if it might be, and if not there, then towards Japan. Lord Salisbury told us that in the Crimea we backed the wrong horse; and that appears to be the general feeling now. Earnestly I trust that when the time comes we shall be wise enough to hold aloof from a Mediterranean quar-

rel, and shall not plunge Europe into blood and tears for the sake of a route to India, which, after all, would really remain as open as before. Asiatic burdens are not worth so fearful a catastrophe. Manfully have we shouldered them, though occasionally they have been staggering, and not lightly shall we give them up. But we are not asked to give them up: not for long yet, when unforeseen contingencies will have arrived, and when Asia herself may be able to control her own destinies. Not ours is the whole world. Our race is dominant in America, in Australia, and in most of Africa. In the long run that may surely suffice for our governing and legislative and civilizing ambition. Meanwhile in Asia we have done what we could, and on the whole have done it well, but we must not allow our work there to annihilate the peace and prosperity of Europe, we must not let the East embroil us in what would undoubtedly be the most fearful war—the most fearful perhaps of all time.

But now I am appearing to argue. That is not my object at present. My object is to test the reality of our peaceful protestations. Let us face this or any other reasonably contingent controversy, and determine, so far as we can de-

termine, how we should behave in it. And if we can happily decide, as I for one would most assuredly decide, then let us enter the peaceful arena with open eyes and open hands, ready to welcome with heartiness the friendly overtures of every nation on the globe.

VIII

THE IRRATIONALITY OF WAR[1]

OR SCIENCE AS AN ELEMENT IN THE DEVELOPING OF INTERNATIONAL GOOD WILL AND UNDERSTANDING

HUMANITY is a race of workers, and on its output of energy the well-being of the planet now largely depends. The work of the human race is directed towards

(1) Sustenance,

(2) Advancement;

and on the whole the work is conducted at high pressure and there is little margin to spare. The more energy that has to be expended on mere existence the less is available for progress and development. Consequently, it is in moderately fertile countries and peaceful times that the greatest steps in Art and Science have been made. When existence is threatened there is neither time nor opportunity for advance.

[1] Written in 1912 at the request of Nicholas Murray Butler, President of Columbia University.

Humanity works in sections, and it is possible for these sections to quarrel and seek to injure or destroy each other; thereby interfering with each other's bare subsistence, and taking attention off higher things. It is notorious that in such disputes much energy can be unprofitably consumed, or, more accurately, degraded; and also that even if there is no active quarrel between two sections, still the possibility of it entails severe preparation and anxiety and much unprofitable caution and disabling fear. So it used to be at one time between families, then between tribes, and now between nations; yet the subdivision of the Race into nations, with differing facilities and a variety of customs and traditions, ought to have a beneficent influence as well as add greatly to the interest of life. So long as the sections co-operate and mutually help each other, all is well; each benefits by the discoveries and advances of the rest, and a valuable spirit of Emulation is aroused. But when emulation degenerates from wholesome rivalry into a spirit of envy, hatred, malice and all uncharitableness, so that the sections wage an internecine conflict, then the warring among the members is a calamitous evil, and humanity as a whole is bound to suffer.

In some departments of civilized life the risk of unwholesome and mutually destructive contest is more rife than in others. Certain fields of labour there are in which the spirit of rivalry never now degenerates into hostility and mistrust. These are the cosmopolitan enterprises and labours to which every nation can contribute, and in the results of which every nation can share. Of all these cosmopolitan efforts those included under the general head Science are among the chief. Literature is more of a National product, the literature of one nation necessarily appeals less forcibly to another nation; alien language is a bar to complete enjoyment. But scientific discovery can be made at once interesting, can be assimilated and its fruits reaped by all. Any discovery made by a group or by an individual becomes thereafter the property of humanity, and the world is advanced a step higher. And, short of catastrophe, such a discovery is made for ever: it is not liable to decay like a picture or a statue; it is in the spirit, so to speak, it is not incarnate. Many discoveries are not only world wide but cosmic, and if ever we are able to communicate with another planet they could be appreciated there too. This is especially the case in such sub-

jects as Mathematics, Physics, and Chemistry, and is probably true of a great part of Biology also. These great fundamental sciences are cosmic in their scope and significance. These and all other sciences are at least international. Science tends to weld the nations together; and even though petty jealousies and personal rivalries exist for a time, they seldom survive a generation: personal quarrels are felt to be unworthy and unseemly, and the successful worker sooner or later meets with a world-wide appreciation.

But it needs all the energy, all the spirit, all the encouragement that can be given, to pursue this work; the labour of peace times is indeed strenuous, the problems to be solved demand the keenest intelligence, the most indomitable patience; and they represent a strain on the highest powers of a nation. To produce a Helmholtz or a Kelvin is a demand on national vigour,—a feeble nation cannot as a rule produce great men. Appreciation also is necessary. Appreciation from other nations is especially welcome and is usually forthcoming; it is a sign and token of civilization when such is the case; and the fact of appreciation reacts with especial benefit and stimulus on the otherwise solitary worker. For such a man must

be in advance of his contemporaries, and yet must not be too hopelessly and utterly beyond the appreciation of them all; the career of a great genius becomes well nigh impossible when the general standard is low.

To cultivate science demands high qualities and strong character, it is a task of difficulty; whereas to rush into a quarrel and fight is easy enough. A savage in this art is an adept. No demand is made on self-control, no lofty national spirit is needed in order to cultivate misunderstanding or the pangs of envy and of greed. And yet it is in the encouragement of this facile mood that the greatest national enthusiasm and Patriotism are felt; merely because the condition recurs at intervals, like an appetite; whereas the steady strain of work for the common good excites no enthusiasm, calls forth no encouragement, and but little recognition or praise. Smooth, indeed, is the path to a quarrel, easy is the descent to war, night and day the gates stand open; but to take up again the works of peace, to climb the steep ascent of science, that is the burden, that the toil.

Nevertheless, it is often claimed that high qualities are demanded by modern warfare; and the claim is well founded. Qualities of mind and

body are indeed evoked by it, and the nobler the nature the more can it respond to the demand, when the special call comes. That is what is asserted, and that is surely true. But this is only one aspect of the universal struggle for existence, it is a natural result of all corporate effort towards a common end: such qualities should be called out by every kind of emulation between nations; and would be, if only the pressure were occasional and episodical instead of constant and steady. Use and wont seem to blunt the feelings, and sap the energy, of the average man. But it is not a different set of qualities that are needed in war, it is the same qualities raised to incandescence by the momentary burst of national feeling. For how are high faculties stimulated by war? Not by the mere killing,—the killing is an episode, almost an accident: the actual fighting is a small part of a campaign. The rage to kill may have a survival value, but it is rapidly becoming obsolete: there is no real lust of slaughter in modern warfare, it is regarded as a grim inevitable necessity. Modern fighting is mostly done by machinery,—especially naval fighting. No personal animosity lies behind it; skill and prowess are evoked, but it is engineering skill and the

prowess born of peaceful practice and essays of sport. The effort is akin to those which lead to success in games. One essential element of ancient human warfare is absent from any modern battle; there is no hate, often no vision, of the foe. Triggers are pulled, or guns fired, and unseen distant men drop; and this may continue till a battle is won; but the triumph is due to the inventive skill that has devised the instruments and the organization that has brought them to the right place at the right time. Modern warfare is a great organization—a great industrial organization, it involves transport, complex machinery, supplies of food and clothing, and many another peace necessity. All these arrangements and faculties and powers are called for and trained and developed in times of peace. Wars are not now won, as they used to be, by extermination, but by successful management and organization; and ultimate victory is largely dependent on the pertinacious power of the purse. It was not so in old times, when men fought face to face and used their muscles to give blows. Then the feelings cultivated by Christianity were in abeyance, then the wounded were slain, noncombatants were rigorously dealt with; then there

might be war to extermination. Those were the logical and rational times, so far as war is concerned. Killing was a savage business, and was appropriately conducted in a savage manner. Now the whole outlook has changed, and the rationality of war has departed; we fight by machinery and industrial organization. Scientific ingenuity devises constantly new apparatus, and skilled manufacturers execute it. A battleship is a scientific laboratory. Thus Science is applied to an alien use—a use which would have to be stigmatized as unholy were it not that in the present unhappy state of European civilization these things are essential to defence.

The power to produce ingenious things and use them is excellent; the gratuitous bringing about of catastrophies by their means is diabolic. That is what war does: it brings about, on purpose, disasters which in peace we regard with special abhorrence,—destruction of crops, railway accidents, shipwrecks, explosions, wounds and violent deaths. The nations are naturally horrified at what they are doing, even while they are still at war; and they send surgeons and nurses to repair the damage done, even to the enemy, as quickly and as painlessly as possible.

Then, why should we continue our rivalry into this illogical and brutal extremity? The only excuse that can be made is that our ancestors did it. But our ancestors had no other way of competing; practically they only came into contact with foreign nations for the sake of bloodshed and plunder. But engineering progress has made travel and international intercourse easy, and we can go abroad now with more facility than they could then travel across England. Language is still a barrier, and is responsible for many misunderstandings, but in all essentials it is easy now to be on friendly terms with every civilized nation. We trade together, we study the same problems, and encounter the same natural difficulties. In thousands of ways we can help each other: in one way and one way alone can we do each other serious damage. Exertion is good, and fighting is strenuous exertion, but why not fight now solely by means of organization and enterprise and scientific skill and ingenuity? Why not show emulation and high spirit in the various industries and arts of peace? Why destroy and ravage the property of humanity? Why should one section seek to destroy another, when all can co-operate together for the

common good, and when all are members of a common brotherhood, so that if one is injured all suffer? Why not give to humanity the benefit of the whole combined enterprise and conjoined cultivated skill; why not discourage the artificially fostered and quite impersonal hate, and omit the too successful and unmeaning butchery? If the end sought were extermination, war would be intelligible; though in these days of mutual interests and commerce, to kill off your customers is surely unwise. But when the nations are working hand in hand in scientific discovery and invention, as well as in Arts and Crafts of every kind, when they recognize each other's good work with real enthusiasm, and hand each other medals and dine together and feel friendly and rejoice in each other's progress,—then suddenly to reverse this attitude, at the bidding of a few frenzied newspaper-writers, and convert the weapons which scientific investigation has made possible into engines of desolation and slaughter—that is monstrous and detestable.

Fortunately, there is hope in the prospect before us; the craftsmen of every land are finding out that their interests are common, they are beginning to realize that it is madness to seek to de-

stroy and ruin each other. The educated people, and especially the men of Science, have long known this. By interchange of periodicals, by frequent international visits, by the action of great Societies, and by making use everywhere of all knowledge wherever it be acquired, they have long practically realized the solidarity of humanity; and, in spite of such political hostilities as are forced upon their notice, their attitude to all co-workers is necessarily and essentially one of fellow-feeling, sympathy, mutual admiration, and brotherhood. No warlike enthusiasm is needed, no alien excitement is called for, to break the monotony of scientific work. In work such as this there is no monotony: excitement and thrill are provided by the prospect of a discovery. There is plenty of room also for effort and strenuous exertion. There is danger too to be encountered, dangers of disease and accident,—witness the self-sacrifice of many an investigator, whether he be a geographical explorer, or an X-ray worker, or a student of tropical disease. There is very little monotonous toil, though there is much steady work. An eruption of barbarism would be no relief, it would be a discord, an in-

terruption as painful and perturbing as an earthquake.

It is the deadly monotony of the ordinary life of the multitude that constitutes a civic, a national danger. It is this that drives people to drink and unworthy relaxation. It is this that makes people welcome the feverish excitement of a catastrophe or of the imminence of war. It is this which is responsible for much of the gambling that goes on. The deadly monotony must be broken, daily life must be made more interesting, work more joyous, human nature must be given a fair chance of equable development. The nation which first realizes the magnitude of the opportunity afforded by earth existence, and the responsibility resting upon those who cooperatively waste it in the mere apparatus and material of bodily life; the nation which by social reform liberates the spirit of humanity—that nation will arouse in its citizens a fervour of patriotism hitherto unknown; and to it will belong, not by military conquest but by divine right, the supremacy of the future and the gratitude of the human race.

IX

THE FUNCTIONS OF MONEY[1]

By money I do not mean coin alone, of course; any stamped document, whether on metal or on paper, is equally money, provided it is able to obtain in exchange a certain portion of human labour, whether of brain or of muscle. It is chiefly in the petty affairs of housekeeping that coin passes from hand to hand. All large mercantile transactions are conducted on a basis of book-keeping, and no coin is, as a rule, actually paid over by anybody.

It will be thought that the word "money" in the title should be replaced by "riches," and indeed the change might avoid some momentary misconception, but one of my theses—no doubt an elementary one—is that the ready possibility and existence of riches is due to a secondary or accidental attribute or function of *money*. After dealing with this consequence, and some conceivable modes of avoiding it, I do in the sequel

[1] An article which appeared in *The Economic Review* for October 1898.

chiefly mean "riches" (inequality of possession), though nowhere do I mean that which in the true sense is "wealth" (real and absolute value to the commonweal). I feel that I owe an apology to professed Economists for presuming to write on a subject outside my province; they are, however, well accustomed to have their domain taken an interest in by outsiders, and they will not be unduly hard on another vagrant.

A thing is of value when it has cost human labour to produce it and when it can be put to some use, whether of ornament or utility. Mere scarcity is not a criterion of value. Helium is scarce enough, but it would fetch a poor price in the market. If it subserved a useful purpose, the lack of price would not matter; but the scarcer a thing is, the less likely is it to be generally useful.

The ultimate standard of value is human labour, but as a practical standard certain valuable counters are used. A sovereign is not a *mere* counter; it is a valuable commodity. It satisfies the two criteria of value: it cost human labour, perhaps life, to find it, and it can be used for dentistry and acid pans and wedding rings. As practical and proximate standards of value

sovereigns serve, but the ultimate standard is human labour. If gold could be picked up like stones it would have to be demonetized; it would no longer serve as a practical standard of value, because its relation to human labour would have altered. Every large discovery of gold acts in this direction, and depreciates the value of a sovereign. Whether this is to be considered a calamity or not depends upon how we regard society. I shall not enter into that question.

My first point is that the standard of money value is the amount and quality of human labour it can produce; and if, as Mr. Ruskin suggested, half a crown were inscribed one man's unskilled labour for one day, and a sovereign were inscribed one man's labour for a week, a five-pound note a week's labour of a skilled artisan and his family, it would tend to bring home to unthinking persons the meaning of what they may be squandering. Indeed, other labels could be put upon a sovereign, of some import to society: subornation of perjury is one function of money; temptation to other forms of dishonour is another. I shall let those functions alone.

A labouring man who receives five shillings has done his day's work therefor, and when he

expends the five shillings in beer or in boots he practically binds himself to do another day's work for that beer or those boots. He can choose his own wages in kind, up to a certain limit of value; the money leaves choice open, but defines the amount of his claim. Suppose, at the end of many years of toil, he has saved £300; he has now the choice whether he will cease to work for the remainder of his old age, and live on his savings, or whether he will buy something, say a picture, with them, at the cost of having to continue to work or beg till death; or, a third alternative, unfortunately only too possible in practice, whether he will entrust his savings (the savings, namely, of his future labour) to Jabez Balfour and his kin. In practice the buying of a picture would be a lunatic act for him, but, nevertheless, in practice people do buy pictures, for £300 and even more. They are thereby handing over to the artist, or more usually to the dealer or middleman, an accumulated stock of human labour, which, if they had to redeem it themselves, would involve them in a good deal of hard work, either past or future. Redeemed in labour somehow it must be, but devices have been found whereby the labour need not be performed by

the purchaser himself. He is perhaps a tax-gatherer or rent-collector, or coupon-cutter, or monopoly-owner, or descendant of a royal favourite, or possessor of some other profitable sinecure, whereby it has been secured that the fruits of the earth belong to him and the labour of it to others.

This is a matter of social arrangement, and has nothing to do with the ordinary purchasing power of money. It is a social arrangement which still has many years of life before it, no doubt, but it is an arrangement on which the spread of education is likely to shed some light, and, when well illuminated, it is an arrangement which may perhaps be changed. I said that it had nothing to do with the purchasing or exchanging power of money, but it has arisen from another very curious property or function of money to which I shall shortly proceed.

Money began as a medium of exchange, a convenient practical standard of universal value, one whose exchanging power could remain dormant and be exercised at will in a way impossible to perishable commodities. This power of exchange is the one legitimate and useful and wholesome function of money, and will, I suppose, last a long time, for it defines the relative claim of each in-

dividual upon society, and indicates to him when he is stepping near the limit of his permissible demands. It is difficult to imagine that a check of this kind will ever cease to be necessary, but it is too much our habit to suppose that what has lasted ten centuries must henceforward be eternal. It is usual for human systems to have their day and cease to be; it is hardly likely that money is so nearly divine in its essence and action that it will prove an exception to the rule. The institution of money as defining relative claims does not even now obtain in the family. The claim of a member of the family who is lame or blind or chronically ill may be very great; on the other hand, the service rendered by a member who is well and strong and able may be very great; but one does not *pay* the other. Co-operation and mutual help is the rule. To some extent it is the rule in any friendly association—even an association for profit, at least when the profit is not that of the workers. One member is sick or incapacitated by accident,—others do his work for a time. On board ship, for instance, I suppose this happens, without any question of money.

So when, some day, the human race or a nation has become a family, its members may manage

to serve and be served according to their real necessities and powers, and not according to some conventional code carefully checked off and limited by means of counters. Utopian! doubtless, but several things taught by Christianity are utopian. By aiming at perfection something far short of it may be attained. It would be strange if, in an ideal Christian State, it should be necessary to check and limit the demands and services of its members by a system of tallies and book-keeping. Indeed, even now a person in illness or other bodily need is taken care of, independently of his means; and that in no grudging spirit, so long as his need is not the result of old age.[1] In that last evil case, indeed, the assistance afforded him is of the most grudging and ignominious kind; but if afflicted with disease, especially if it be an interesting ailment, no inquiry is made as to whether it arose from indolence or vice; he is taken skilful care of by society until dead or reasonably well. So that even now the purchasing power of money is in some cases dispensed with, and direct service rendered according to need. Nor is the effect of hospital aid on its recipient found to be evil; on

[1] This was written before the Introduction of Old Age Pensions.

the contrary, it has often proved regenerative, and has done something to humanize the rebellious feelings which other forms of social activity had sown and fostered.

Press this a little further, into rooms of health instead of only into rooms of sickness, and an approach to one aspect of William Morris's "Nowhere" will have been attained. Far be it from me to press that Utopia in detail, or to praise it as entirely desirable; all I need show now is that the idea of dispensing with money is not so hopelessly fanciful and impracticable as at first it sounds.

Once more, in certain cases it makes but little practical difference whether a community says to an artist or musician or philosopher, "Come and live among us, and edify or interest us, and we will supply your needs in the way of modest house-room, and service, and recreation," or whether it says, "Come, and we will adjudge to you the optional distribution of so many hundred counters annually." The latter method is the more business-like, but, so long as it is only a question of spending and not of saving up for a future day, there is no great difference.

The real and extraordinary use and abuse of

money arises from its happening to possess that collateral and at first unsuspected and unintended power of which I have already spoken—namely, the power to be stored and accumulated almost without limit, and afterwards passed on from owner to owner, without service necessarily rendered by the recipient, but always with the power of compelling labour on the part of the bulk of humanity: a kind of magic-wand, compelling homage, obedience, and service to the accidental possessor for the time being.

This secondary function of money has entirely eclipsed its mere exchange function in national and international importance. It has given rise to a new and extraordinarily powerful class, the millionaire and financier class, who "own," as they call it, the land, and the instruments of production, and very nearly own the labour itself. Such accumulation would be impossible save for the existence of money. No man could store food, or provender, or clothes, or hardware. Moth and rust would corrupt. No man can conveniently or safely hoard sovereigns in any great quantity. Thieves would be too likely to break through and steal. But the ingenuity of man has got over these ancient difficulties, and by aid of

stocks and shares it is now quite possible to have our treasure where our heart is.

The result is regarded with equanimity, but it cannot be considered altogether happy and peaceful. Disputes arise between the man who owns the property and the workmen who have to use it. The man who owns is not, indeed, nowadays always a man: he is often a many-headed monster —*société anonyme,* as they call it in France; and being free from individual feeling and responsibility, is frequently greedy, unimaginative, and thoughtless. A man of means to-day may be at the same time—of course, by deputy—a manufacturing chemist, a coal proprietor, an iron founder, a timber merchant, a shipowner, a landlord, and a farmer; and not one of these businesses shall he even pretend to understand or touch with the tips of his fingers, so long as he possess a competent agent to superintend it.

By no possibility could one man's labour result in a great accumulation of wealth. Let him be as industrious as a whole colony of ants, and work twenty-four hours a day, he could not for any day-wage earn a million. By steady work a man can earn a living, perhaps a good living, but no more. Fortunes are not made in that way.

The fact that fortunes can, and indeed must, be otherwise made, is not an encouragement to steady industry. I believe that it exerts an extremely depressing and unwholesome influence on steady industry.

But it may be said that the personal labour of some men of genius is of vast worth to the human race; and the saying is indeed true; but worth of this kind is seldom rightly estimated by the public, and the coin in which they pay for it is sometimes of a strange kind. Did Kepler or Milton leave a fortune? What price do we offer for the services of a Mazzini or a Gordon? It is not one of the functions of money to pay for such services as those. As I have said elsewhere, death was the only fitting *payment* for the Sermon on the Mount.

No more on that subject. Return to our rich men.

Has not a millionaire worked for his fortune? Has he not taken thought for it, and striven early and late, and been clever and strong? Yes, indeed, in many cases it is so; and in any state of society one cannot help admiring the architect of his own fortunes, even if he is the architect of nothing else. But how many there are who are

much else! Do we not know of men, noble men in all reality, whose desire is to spend and be spent in the public service, who are foremost in good works, not only with their purses but with their living interest, with themselves?

But what then: has not every condition of society its saints? Ill would it be for the world if the bright powers and heart-goodness of humanity could not anywhere or at all flourish, because of the harmfulness of the social atmosphere. There are delicate exotics which may show rare beauty if properly cultivated; these we shall not see in an untended garden; but strong and hardy plants which rear their heads and flourish in almost any climate are evidence, not of the goodness of the climate, but of the vitality and perfection of their seed and sap. Such men are among the best hopes of humanity, the eye of the needle is their opportunity, and, whether it be hard or easy, through it they go.

We may take a lower level than that, however, and say, further, that if every rich man had really been the architect of his own fortune, things would not be so bad. Such a man must have character, there must be some natural fitness between him and his surroundings which has re-

sulted in the accumulation of so much of the world's wealth in his hands. It is well, it is at least permissible, that the man who has accumulated wealth should also exercise the power of it, and have the option of dispensing it. But in nine cases out of ten the maker of the fortune is not its dispenser. He may have no time, he may have no inclination; he passes it on to a successor; he is allowed to do so by the social institution of inheritance.

What natural fitness is there now about this new possessor? Where is his grit, and strong character, and born mastery of men and things? It is an affair of chance. He may be a peaceful, virtuous citizen; he may be a riotous sot: he may be an industrious labourer for the public good; he may spend all his hours in bed, and think of no one but himself. It is no matter to his fortune; men work while he sleeps, he "employs" much labour, his property increases of itself: and if he will only abstain from a few rash amusements, like horse-racing or gambling, ordinary vices will in no way damage his property, and he can pass it on to his nephew when he chooses, or when it is time for him, too, to go.

"Work mun ha' gone to the getting wherever

money was got." Yes, truly it must, but not necessarily the work of the owner nor even the getter of the money. An ingenious person knows how to direct streams of wealth into his direction without expending much labour (witness some transactions connected with South African and other company promoting); and by the institution of the unearned increment, and the further institution of inheritance, it is possible for the idlest scamp on the planet to become a multi-millionaire, for the most vicious to become the patron of twenty livings, for an unscrupulous and selfish scoundrel to have the disposal of a considerable portion of the world's wealth. Is there any consolation in the thought that an unwieldy property is no blessing to the man who possesses it? Is not this an aggravation of the misfortune? Evil to everybody else and a curse to the man himself! Surely it is time to reconsider the institution of inheritance of property?

Constantly one meets the ghastly fallacy that it matters not who has the money, because it can only be spent, and so every one must share it sooner or later. I want to attack this fallacy. The "sooner or later" is part of it; time is of the essence of any contract to a short-lived race

like ourselves; if decent income is postponed till too late in life, it does make a difference. But the question of time is the most obvious, and so the least deadly, part of the fallacy; the deadly part is not seeing that it is the transfer of money, *the power of directing the transfer,* that is important, and not the money itself. Service can be demanded and may have to be rendered for each transfer, and it is the power of directing the transfer and determining the service that constitutes the wealth. Otherwise money would be infinite; a sovereign can be handed on and on and on, and is there all the time. Is it, then, a hundred sovereigns? No; but one. It is one at each transfer, and that is the meaning of a sovereign. A millionaire has the transferring power of a million sovereigns; he can transfer them when, where, and how he likes: and that is his wealth. By the institution of interest it is indeed more, for by that means he can purchase £40,000 worth of labour every year, and his son and grandson can do the same for ever, if they are only wary and chary of the principal; but that is not my point at present. My point is, that riches consist in the control of the transfer of the money *once.*

When transferred, of course somebody has it, and that somebody has now his portion of transferring power, *i.e.* purchasing power, to exercise; but it has made all the difference to him whether he has had to work in a yard for five years to get the power, or whether it was his to start with. To say that it does not matter who owns the money is nonsense, only possible to a purblind and confused view of the case. This error is not made in respect of other commodities. It is not thought immaterial who has the gunpowder and the bullets, even though the human race is sure to get the benefit of their distribution sooner or later. Their aim and direction of transfer is attended to.

But there is another fallacy, a secondary outcome of the institution of interest. It is said that the capital of a scamp is, after all, invested in remunerative employment, and that though he may waste the income in debauching himself and his fellows, the capital is honestly employed, and results in much labour and profit. But now consider whence comes the profit: why is there a dividend each year in a manufacturing business? and why does money thus grow, as if it possessed vegetable or animal life? Is it not because ani-

mal life indeed is at work? Is it not because of the brains, and arms, and fingers of a thousand able and industrious workers? Is it not the enterprise and the labour that has really produced the dividend? Would there be any such fruits without labour?

No; but, it will be said, neither could there be any profit without capital. "What capital?" let us ask. Papers in a lawyer's office, figures in a banker's book, gold bars in somebody's cellar? No, not these, but real capital—ships and engines, and land and tools, and all the instruments of production; of which land and sun and air are, after all, chief. Are not these needful to profit? Most certainly they are. But why on earth should they be owned by that hypothetical sluggard or scamp? "Que diable allait-il faire dans cette galère?" Why do they not belong to those who use them, or to those who made them, or to the community whose needs they serve? Suppose that sluggard and his bank books and his title deeds were all blown into extinction, blown out of human memory, and ceased to be, in a sane universe; what would be the difference? Not much difference to the land and the sunshine and the air, not much difference to the engines and

the ships and the tools, not much difference to the manager, and farmer, and artisan, and labourer: but, oh great perplexity, nobody to receive the dividend! What on earth is to be done with it? Try and recollect the persons who would have indirectly received it had its late owner not so untimely disappeared. Let those persons come for it—a motley crew, not altogether respectable, not an army of whom society is very proud;—let them come to the manager of the factory, to the steward of the ships, to the accountants in the various businesses dependent on the departed owner's capital, and receive the dividend direct, without pandering to the body of the defunct heir. The spectacle would be an instructive one. The dividend would be really a dividend now, otherwise the difference would not be great. Perhaps in the light of the instruction afforded by the spectacle, more difference might accrue in time; perhaps the profits resulting from the industry might come to be otherwise distributed.

So far, however, the effects of the gigantic individual fortunes encouraged by our modern money system have been of comparatively small area, and almost individual in scope; but there

is now a larger function of money to be considered—the tendency of monetary interests to dominate the political world.

I am not touching on party politics—it has nothing to do with one party more than another, but every one must be convinced that the developments of the British Empire for good or ill are regulated and controlled by financial interests. A savage country is conquered, and its king, as we say, "punished," when his territory is required for trade purposes—not before; nor very much after: for we are a pushing race, and Maxim guns are fine things, automatic empire-extenders. The motives which induce the unfinancial part of the British public to acquiesce in such violences are not the motives really at work. The destruction of idols and the prevention of human sacrifices are not the real reasons for expensive expeditions. If these were the motives, such expeditions would be crusades. The time for crusades has for the present gone by,—the near East is witness enough to that.[1]

We hold whatever is of value in city quotations: we attack when foes are weak, we crouch when foes are strong: we are learning to enslave free

[1] Written in 1898.

though uncivilized people, and make them work for the good of a London company; we have long taught them our vices, and administered to them our diseases; in time we shall exterminate them: and by judicious meekness whenever we have a chance of really dangerous warfare, we may ultimately hope to inherit the earth.

I care not if it is opportune or appropriate to touch on such things here and now. Some of our doings in Africa have been bad enough, but our policy in Crete and Armenia, and every one of our dealings with Turkey I loathe and detest. It was not the policy of the nation—the nation was for once ready for a strong, upright, and disinterested policy. Owners of stocks and shares might quake, but the heart of the nation was sound; it wanted no longer an ignominious and bastard peace, a peace not born of love and pity for humanity, but the offspring of covetousness and fear of the consequences of past misdeeds. The country was ready for an unselfish act, it was ready to use its great naval strength in support of struggling nationalities. It did not fear the German or any other emperor; it did not want to ask permission of the discord of Europe or any other agglomeration of conflicting interests; and

if the nation had been called upon, it would have risen with a spontaneous enthusiasm that would have renewed its youth, shaken off the fat lethargy begotten of its recent commercial prosperity, and placed it once more in a position of dignity and honour in European councils. If our inaction, our misaction rather, and our craven yield, was not the policy of the nation, neither was it the wish of the Government. We were told that any other action was too dangerous. In every way it is clear that what we did, we did not wish to do, and that we wished to see many things done which something, some interests, forbade us to do. What interests were those? The Prime Minister told us in so many words, his position was that of a Trustee. The interests at stake were too great. Decided acts would have been dangerous,—not to army and navy, but to finance. The world is ruled by financiers. Wars are made by those who provide the immediate money for them. Neither Cretan nor Armenian (nor Greek either, for that matter) was in financial favour;[1] so the rulers of the earth decided to obliterate and weaken, so far as it seemed to them

[1] And indeed they do not appear to be the salt of the earth,—centuries of misgovernment seldom develop admirable racial qualities; but the question was not whether they should be admired, but whether they should be slaughtered.

good. And we, we who had assumed the responsibility for keeping the Turk in Europe, and for placing the Armenians under his rule,—we, whose pride it has been to sympathize with people struggling to be free and revolting against oppression,—we, who sicken at the thought of massacre in cold blood, what did we do?

Seven miles of war-ships, and dare not lift a finger: dare not make up our own minds and stick to it! In face of a righteous and simple cause, retreat; in face of a weak or small nationality, bluster: this is the outcome of government from the Stock Exchange. There would have been no war, had we been righteously strong, had we shown that what we did was not done in favour of some miserable petty interest, was not done because we wanted another backstairs Cyprus. Hard, perhaps, to convince people of disinterestedness now, after years of—diplomacy; but it could have been done. Those who think otherwise, will hold that one of the functions of money has been to keep the peace; fear of disturbed securities has been a potent peace preserver. Well, we shall see how long it will last. Our masters will let us know in good time, and when they choose the time for fighting I doubt if

the people will have much heart for the business.

Dread of war at all costs is not the best security for a noble and worthy peace; nor is it seemly for this country with its great traditions, to be subservient to any masters, contrary to its own sense of right, its own horror of injustice.

"Our masters the Emperors," some of the papers say: but those are not our real and true masters; there is a power behind the Emperors, to which even they must submit, though they do so with less grace and habitual ease than ourselves. Newspapers are owned, opinion is manufactured, nations are governed, in one interest, the interest of property. There is a fifth estate of the realm now, more powerful than any of the other four, and the nation bows down before it. The supreme power is the power of the purse. The latest of the functions of money is to rule the modern world.

The following propositions may serve as a summary of the contentions in this chapter:—

1. That human labour is the ultimate standard of value, and that coins might instructively be inscribed in terms of labour.

2. That by the institution of banks, stocks and

shares, and of inheritance, the original exchange power of money has become subordinate to its secondary and accidental but now supreme and unlimited storage power.

3. That the possession of money means the control of one transfer of it; *i.e.* the determining of when and how it shall become active and influential on life.

4. That since wealth is the power of determining the direction of human activity, the personality of the owner is a vitally important factor.

5. That large fortunes are a menace to society by reason of the contrasts they emphasize, the power they confer, and the uncertain character of their owners.

6. That the present frequency of large fortunes is due to artificial social arrangements, which may be altered; and that it is desirable to reconsider and modify the law of inheritance.

7. That steady industry and moderate income are wholesomer, both for a nation and for an individual, than feverish activity and rapid acquisition.

8. That financial interests play a greater part in national and international politics than is desirable.

X

THE PURSUIT OF WEALTH[1]

In speaking to the adult students of a college like this, persons who are engaged in the ordinary business of life, and for whose special benefit classes are held in the evening, one may adopt a tone different from that suitable to youths who have the whole day at liberty for study, and whose attendance here is often as much due to the influence of parent or guardian as to individual judgment and free will. I may assume that everyone who comes to an evening class comes with a full understanding of the reasons for coming, and of the object to be gained.

Now, I want to ask what are those reasons, and what is that object. Are your reasons for coming here in harmony with the main purpose of the life of this city and country, or are they altogether discordant with that purpose?

I suppose the main purpose of the English nation at the present time would be said to be the

[1] An address to Evening Students at University College, Liverpool, in 1886.

pursuit of Wealth. I am by no means satisfied that this is a true statement of the average Englishman's main purpose, in fact I am pretty certain that it is not a true statement if understood accurately, but I do think it is his own idea of his main purpose. His principle aim is to "get on," and his idea of getting on is to acquire more money than his neighbours. This it is which prompts the major part of commercial enterprise, and rewards the energy of the business man.

Well, what is the result of all our commercial prosperity and worship of the goddess of getting on? We are reckoned a wealthy nation. Liverpool is a wealthy city. But a foreigner, landing at a northern dock, after he has admired the river and the line of docks,—true wealth of which the city is justly proud,—may be a little staggered at the aspect of the rest of that region, and depressed by the unrelieved squalor which surrounds him on all hands. If he ask to see the largest building in the city, he must, I suppose, be taken to the top of Brownlow Hill, and shown, not the college, but the work-house; and he may come to the conclusion that the wealth and prosperity of the city are, to say the least, very unequally distributed. The glaring thing, in a

place like this, is not the wealth, but the extraordinary inequality of wealth: extreme riches, and extreme poverty. It may indeed be conjectured that what the average man is really pursuing is not so much national wealth as individual riches, *i.e.* inequalities of wealth; and that a great part of modern trade consists in endeavouring to establish an inequality of wealth in our own favour, *i.e.* to make ourselves rich at the expense of others.

Perhaps something like this is the main purpose of many energetic citizens; and perhaps it is not altogether a satisfactory purpose, or one that very greatly tends to enhance the happiness and comfort of the people.

Let us try and look back at the pursuit of some famous peoples in past times. Many here can do it for themselves. I can only roughly try to indicate my meaning.

The main purpose of an Athenian in the time of Socrates seems to have been to discuss schemes of philosophy, and to probe to the ultimate nature of things. Highly unpractical objects, and a great waste of time, such occupation would seem to the modern Englishman, whose object in life, whatever it may be, is certainly not this. Yet we do not find that the Athenians of this date

take a low position in the general estimate of the world, and their writings and talkings on philosophy seem likely to be about as immortal as anything connected with their city, unless it be the hills upon which it was built.

The result of their life and thought is a permanent and rich possession to mankind; its effect when rediscovered after centuries of oblivion was informing and stimulating in the highest degree; and we may conjecture that never again will the human race allow this possession to be buried in even temporary oblivion.

A permanent and rich possession I have called it and you allow the words. Are not permanent and rich possessions wealth? And were these idle and talkative Athenians engaged in the pursuit and manufacture of wealth? It does not seem improbable. It is in fact difficult to deny the applicability of these terms: and if so their occupation cannot after all have been quite so wasteful and unpractical as, to a modern Englishman, it at first sight appears.

What again was the main purpose of an Englishman in the time of Elizabeth? Was it not in the fullest and freest sense to live, to develop his life and that of others in the largest manner,

to travel and see the world, to depict human life in the drama, to enjoy fresh air and open country and scenes of joyousness. Professor Bradley has told us how men's minds were filled with the sense of largeness and beauty in the world, which new discoveries and the opening of ancient literatures had almost created anew for them. Life was a thing to be rejoiced in and made much of; even the life of the common people seemed joyous, and its development a worthy theme for poetry and romance. And the result was a patriotism capable of repelling an Armada, and a literature which in some respects surpasses everything that has been done in the world, before or since.

Are Shakespeare and Milton wealth to the human race, or are they not? If you deny the term "wealth" to such perennial sources of enjoyment to unborn generations, and yet grant it to a piece of furniture, or a collection of minerals, you cannot surely be attending to the real meaning of the term.

What is this thing we call wealth? In answering this question I have no wish to dogmatize. I merely wish to suggest the answer that commends itself to me and to leave the question with you

for your own consideration. I believe there are few more vital ones if it be properly understood.

First, I want to distinguish it not only from money, but from riches. The English language abounds in words which are roughly used as synonyms, which are really not synonyms, but are capable of being accurately defined and used each in its special and distinctive sense. In physics we have happily discovered this, and continually make use of common words, defining them so as to convey an accurate meaning, and distinguishing between words which in common speech have the same, or a very indefinite, signification. Thus force, energy, momentum, impulse, power, activity, and a host of others, have now all accurate and well defined meanings in Physics, though by no means in daily life. Even speed and velocity are in science no longer exact synonyms. Undulation, wave, and ripple differ essentially.

This apprehension and fixing of English words, instead of inventing some barbarous Greek compound, is much to be commended; and it would be probably very conducive to clear and precise understanding of other matters if *terms* were studied and used far more carefully than they at present are. Few things are more truly educa-

tive than a careful and precise use of language. "Wealth," and "riches," and "money," "value," "price," and "cost," are terms all capable of definite and distinct meanings, but at present they are very loosely used.

Now, "Money" is defined by Mr. Ruskin as a documentary claim to the possession of wealth: it matters not whether it be stamped upon metal or upon paper, it is essentially of the nature of a stamp. It is true that the metal has other uses, and possesses intrinsic worth for other purposes, but *as money* its value lies in its durability and in its stamp: it is essentially a document.

The term "Riches," properly used, signifies inequality of wealth; it is a purely relative term, one can only be rich by reason of other people being poor. If they don't want your money the possession of it gives you no power over them. But to hungry and needy persons a handful of sovereigns is an object of intense desire, and the fortunate possessor of them can obtain much servile labour in exchange for them.

There are thus two ways of getting rich, either by increasing our own wealth, or by diminishing that of other people: inequality of possession is the essence of riches. Wealth is a human thing;

riches are purely individual, and can be attained by mere transfer, or by gambling, without the production of any wealth whatever. You cannot have riches without there being also poverty. It need not necessarily be excessive or grinding, but relative poverty the idea of riches, accurately considered, implies; and seldom has the lowest form of poverty failed to be both grinding and degrading.

But "Wealth," what is that? Is it not the possession of valuable things by persons capable of appreciating them? And are not valuable things those which "avail" in developing a complete human life? This is Mr. Ruskin's form of expression,—I do not insist upon any form of expression,—but taking the word in its strict etymological sense, as allied with "weal" or "well-being," we have only to think for ourselves what are those things which conduce to our true well-being, and those things are to us "wealth."

The majority of mankind seem to consider that cash, and other property so far as it has a cash value, is an object peculiarly conducive to well-being, and they accordingly have called this pre-eminently "wealth." I by no means deny that it is one form of wealth; as a secondary adjunct, a

means of enlarging one's life, and of enhancing the power of other and more primary forms of wealth, it is vitally important; but I doubt its pre-eminence. Time, health, a large human interest and sympathy, these surely conduce to the well-being of an individual or society, quite as much as the possession of gold, or houses, or land, or works of art. Though these also are true wealth to those who can use them.

For wealth has a twofold aspect, an objective and a subjective. A thing must not only be valuable in itself, it must be capable of being appreciated by its possessor; and to those who can appreciate it, to them only is it wealth. All these things are urged upon us by Mr. Ruskin, and the illustrations which follow are largely borrowed from him.

A picture is not wealth to a dealer, or at least is only latent or potential wealth; it is a mere medium of exchange, a documentary evidence of so much money which someone may be willing to give for the possession of that picture. A man who only owns things that he may sell them at an enhanced price is in fact a dealer or a storekeeper, whatever he may call himself.

Really to possess a thing we must be capable

of appreciating it, we must have it for use and not for sale. A volume of Plato, or Newton, or Ruskin, on one's shelves, is no wealth to us unless we can use and appreciate it. A man who buys the Kelmscott Chaucer for £20, simply because he thinks that in a few years he can re-sell it for £80, and meanwhile never looks at it except with this thought in his mind, is a retailer of second-hand goods, and for him the book has been printed in vain.

The essence of wealth, again, does not always consist in its absolute amount; its twofold aspect is still prominent. A small absolute amount may become of priceless value in special circumstances. A half-crown may represent true wealth to a poor woman whose sick child may be enabled, by its purchasing power, to tide over the crisis of an illness. A hundred sovereigns may be no wealth, but the direst illth, to the drowning wretch in whose pockets they serve only as a load to drag him to destruction. Such a man cannot be said to have the gold; the gold has him. Is he after all so exceptional a case?

What is the greatest wealth of a city like Liverpool?

First, surely the energy and public spirit of its

inhabitants, without which all else were barren and unprofitable.

Second, its river frontage and line of docks; then, perhaps, its library, museum, and picture gallery; or perhaps its college and its schools; and so on. It is unnecessary to particularize further; but it is manifest that all these things have a two-fold aspect, they imply the power of use and of appreciation; so more particularly do great books, great discoveries, great works of art and natural scenery.

A mountain, a lake, a streamlet, are wealth to the man with soul and eyes to feel their beauty, whether he has a title-deed at his lawyer's for them or not; to the man whose eyes are dark, whose ears are stopped, and whose heart is dull, the most beautiful things in the world exist in vain. Such a man may be rolling in coin, and yet, as Mr. Ruskin says, he may be no more wealthy than the locks of his own strong boxes; he is inherently and eternally incapable of possessing wealth. He collects coin as a child might collect marbles, or a school-boy postage-stamps. He has no real tastes. Everything he possesses he reckons as worth so many additional gold counters, and that is all their value to him.

A poem, or a proposition in Mathematics, is worthless rubbish to some people: to the trained intelligence it may give the keenest delight. The quantity of things in the world, thus capable of *becoming* wealth, is nearly or quite infinite: all that is wanted, to make all this potential wealth actual, is the seeing eye and the understanding heart. The development of *these* is the real function of higher education, and by means of these alone is the possession of true wealth possible.

How should we reckon the value of things, if not in money?

There are some things altogether invaluable. What was the value of Caxton's printing press to England? Suppose it had been possible to sell it and all its progeny out of the country,—to sell away the right of printing for say three centuries for some hundred million pounds or the like: would it have been a good bargain? Suppose it were possible for Liverpool to sell its birthright sea-arm to Manchester: could it be made a profitable transaction? Suppose, by withholding labour and capital, it allowed the Mersey to silt up: would not all England be the poorer? These things are not to be reckoned in money.

This is the nature of all the highest forms of wealth. The Alps to the Swiss are not a part of his wealth, they are the whole of it; without them they could never have preserved their independence and remained a nation. What is the value of Dante or Michael Angelo to Italy; of Shakespeare and Milton, of Tennyson and Morris, to England? The power of England we are sometimes told is coal! Nay, rather, is it not that which

> "though the whole world turn to coal
> Then chiefly lives"?

If you grant me then that wealth, so far from being money, is not necessarily to be reckoned in money value at all; that wealth is that which is valuable in developing a complete human life, individual and social, and that certain kinds of it are altogether invaluable; that fresh air and sunshine are wealth, that beautiful country and mountains and green fields are wealth, that great books and pictures and serviceable commodities are wealth, in the hands of those who rightly understand and appreciate them; if you further grant me that wealth unappreciated and unpossessed is but potential or latent, and that to bring out its true character demands the seeing

eye and the understanding heart; that persons must be trained in order to be capable of really and truly possessing wealth, and that without such training or natural gift a man may be inherently incapable of any wealth whatever, though he live in a world full of beauty, surrounded by the productions of the wise and inspired of all ages, and with a ledger containing any number of ciphers after the one:—if you grant all this, then I think you must feel with me that the pursuit and true understanding of wealth is the most important sublunary occupation in which men can engage, and that the functions of this college are very closely connected with it indeed.

What are these classes all for? Why do you come to study literature, and art, and philosophy, and economy, and mathematics, and history, and classics, and science, and all these things?

I asked you this question before, but this time I want to answer it. It is not that you may become capable of possessing true wealth; that you may develop your heart and brain and soul, to be able to appreciate the great discoveries that are made in science, to sympathize with human struggle and effort, to perceive the beauty and order of nature, to take a worthy part in the life

around you, and to participate in the highest aspirations of man?

You learn languages, that the learning and wisdom of the past may be open to you, and that you may better understand and use your mother tongue,—the instrument by which you not only communicate with others, but without which it is doubtful whether you could think, in general terms, at all.

You learn history and literature, and try to understand and sympathize with great men and great movements in the past, that by their aid you may better understand, and more wisely act, in the corresponding, but more perplexing, movements of to-day. You are thus no longer limited to the experience of your own life-time, nor of your own country; all the preserved experience of the world is before you: a rich endowment on which you have only to enter and take possession.

Again, you study art, that you may discern the meaning of all this helpless and futile effort after beauty and decoration, which goes on all round you at the present time, and which signally fails to attain any result on a large scale other than a sullen ugliness. You go back to the times when magnificent art was really possible, and you try

to learn why it was possible then and not possible now. What was the different tone in society which enabled poor men to produce, and rich men to appreciate art? Then, scarcely, a house-window, or cottage-roof, could be built, except in some form of grateful beauty; now, we build factories, and chimneys, and furnaces, and bridges, and our jerry builders run us up houses by the score, but they are not beautiful, they are often not even comfortable or water-tight.

Why has this palsy fallen upon art! And why is the highest modern literature, as it seems to me, a literature of a kind of despair, not of a high and hopeful outlook into a land of promise? Can it be that we are mistaking riches for wealth, that we are merely struggling to set up inequality of possession, and that for true wealth and wisdom the bulk of the nation care very little, and have no notion of really striving for it? I do not answer the question, I only suggest it. I say the reason of the decline of art, and the conditions under which it may again be possible, are questions which, if you come here, you *must* study, whether you do so explicitly and consciously or not.

You come here, once more, to study science

and mathematics, that some glimpse of the magnificent discoveries of the present age may be gained by you, and that you may not go out of the world having never really lived in it, having never known the conceptions towards which men are striving, the truths they are dimly beginning to perceive. The horizon of scientific truth is broadening and brightening, and you are living in the midst of it. It is your right to know and see something of it. It is not to be seen without an effort; it is not to be felt equally in all moods, nor by all minds: but the times when a clear perception of some wide embracing law is attained, when the splendid harmony and correlation of the universe are even dimly glimpsed, these times more than compensate for years of arduous but not ungrateful struggle; and if asked, as indeed sometimes you *are* asked, practically though not directly, whether these high gains are worth a thousand pounds, or fifty thousand pounds, you scoff, as though offered money for your eyes, or for your life, or for your dearest friend. Wisdom is more to be desired than rubies! aye truly is it: it is an old saying, but the world does not yet really believe it.

Many of the inhabitants of a city like this

labour on year after year, some in pitiable and yet pitiless poverty; others, enriched by this very poverty and by the power which it gives over the souls and bodies of their fellows, employing them or disemploying them as it suits their convenience, accumulating possessions and faring sumptuously every day. But the wealth of the universe around them,—some at least know nothing of it: with eyes unopened, and ears quite deaf to the harmonies of nature, they accumulate coins and add up figures in their ledgers and are accounted wealthy men. Everything they have they reckon in terms of money; and the world reckons them also by their own standard, and, without felt sarcasm, says they are "worth" half a million pounds, or, it may be, less.

Their time, they say, is money. Their health is money. They will willingly part with these real goods for gold. Hear what Mr. Ruskin says in "Time and Tide" on this head.

"Time is money"—so say your practised merchants and economists. None of them, however, I fancy, as they draw towards death, find that the reverse is true, and that "money is time"? Perhaps it might be better for them in the end if they did not turn so much of their time into money, lest, perchance, they also turn

Eternity into it! There are other things, however, which in the same sense are money, or can be changed into it, as well as time. Health is money, wit is money, knowledge is money; and all your health, and wit, and knowledge may be changed for gold; and the happy goal so reached, of a sick, insane, and blind, auriferous old age; but the gold cannot be changed in its turn back into health and wit.

"Time is money"; the words tingle in my ears so that I can't go on writing. Is it nothing better, then? If we could thoroughly understand that time was—*itself,*—would it not be more to the purpose? A thing of which loss or gain was absolute loss, and perfect gain. And that it was expedient also to buy health and knowledge with money, if so purchaseable; but not to buy money with *them?*

I have asked why you come to these and the like classes, or why you study earnestly, as best you may, at home; and I have also virtually asked why a vast number of others in this populous city do not also come, and take advantage of the very remarkable and really splendid opportunities which the insight of a few enlightened citizens has provided for them, and crowd these lecture rooms to overflowing, as they ought to be crowded; and provisionally and partially I have ventured to suggest at least one an-

swer to both these questions. But some may object that the reasons I have suggested for being in earnest about self-culture, are not the true ones in their case: they may even think that aiming at a complete development of our own life is a selfish aim, and that their wish is rather to be useful in their day and generation; they judge that by learning say engineering, or physics, they can do their handicraft work better, or by learning languages they can do their business better and more usefully, and so on. Good and worthy aims, against which no one has a word to say; and, if carried out in that spirit, just as capable of developing your life as any other pursuit. But I deny that the development of one's highest self can be in any sense selfish. The test of true wealth is that it is essentially unselfish, it must be shared with others. A discovery, a symphony, a poem; we do not feel that we really possess them until they are imparted and made common property. Whatever tends to be hoarded up, and selfishly retained, may be individual riches, but it is not national wealth.

We may not see exactly how what we are engaged in is to benefit humanity; it is not necessary that we should. It may be in small ways,

it may be in large; a man does not always know the full effect of his own actions. When Hamlet and Othello were being written, I suppose their author was thinking mainly of the audience in the Globe Theatre, certainly not at all of us good people on the verge of the twentieth century. When Newton pondered over his mathematics, and problems in gravitation and optics; or when Darwin made his voyages in the *Beagle,* and patiently accumulated those stores of information which were destined afterwards to establish so magnificent a generalization; he could not know what was to be the outcome of all the patient toil which had to be gone through. Nothing great is accomplished, even by a genius, without continuous and severe labour—to people not geniuses the labour must be still more arduous: but its outcome is in no case manifest beforehand. We can only work on with steady patience; allowing ourselves, not only often, but constantly, to lose sight of the ultimate objects for which we work; and just get ourselves into a good steady habit of plodding: encouraging ourselves at times, may be, by lifting our eyes and surveying the ground already traversed, and the general lie of the country in front of us; but, after such occasional survey, falling

back into the same routine of steady work: work not by any means in its own way unenjoyable, but very far ordinarily from being either exciting or exceptionally brilliant.

It is possible that some might be inclined to give as a reason for coming to these classes, or for otherwise struggling after knowledge, that they hope by that means to increase their income.

I trust this is not a primary object. A secondary result of increased culture, it is indeed not unlikely to be; but to set it up as the primary object of education shows a complete misapprehension of the relative value of things. One may well strive for money to get education; not surely for education in order to get money.

True, some people have to struggle for a bare subsistence; to them I do not presume to speak. I deeply deplore the dire need there is, in what used to be "merrie England," for such a baneful struggle for the necessaries of life, among by far the greater number of the population; and I would willingly act with others in helping forward such much needed reforms as may abate it. It is ill talking between a full man and an empty—it is ill lecturing to a man insufficiently supplied with the necessaries of life,—it behoves us rather

to be silent in his presence, and to think earnestly what action may be taken to remove this blight of poverty from our land,—not by partial charity, but by reform of those great and patent abuses which we believe (rightly or wrongly) are responsible for it.

There have been cases where the fire of learning has burnt so hot that it could cope even with physical hunger; and a piteous tale is told by Smiles of a common soldier who, having only a penny in the world, bought a primer with the half of it, and his supper with the other half. But the majority of men cannot be expected to think much about self-culture until the ordinary comforts of life are supplied. This standpoint reached, however, knowledge and money are no longer co-ordinate, and should not be put into competition with each other.

The old rule,—that it is unnecessary to take much thought for increasing salaries, or for food and clothing, provided we do give most earnest thought to doing whatever work we are engaged in, in the best possible way; and that, if we do this, then all those other things will be added to us,—seems to me a doctrine literally and precisely true, and to be a far more really practical and

salutary rule than many maxims believed in by self-styled practical persons.

In all these matters we have to consider what it is we really want. What is the meaning of life? What shall we make our primary aim, and what our secondary? If getting on is our primary aim, surely it is politic to ask what do we want to get on for? What do we ultimately expect?

Take commercial England at the present time, and ask what is its most urgent aim? It would seem to be "markets." All over the world we hunt about for places to shoot our commodities into, as if they were so much rubbish quite useless at home; and yet multitudes at home are ill-clad, unshod, and vilely housed. Surely there is something wrong here? What it is I confess I do not know, unless it be that we have some quite mistaken ideal.

We long for better trade; suppose we got it. Suppose Manchester spread over six times its present area; suppose Widnes and St. Helens crawled up to Liverpool, and Lancashire smoke penetrated more thickly than it yet does to Windermere and Coniston. Suppose the mineral wealth of the Lake district began to be exhumed,

and fresh beds of coal were discovered, and the whole face of England became like the tract between Wolverhampton and Birmingham; and forges and anvils rang night and day, and all our goods were shipped out of the country, quick, to China and to Burmah: much food, and articles of luxury for the rich, being imported in exchange. And suppose the whole people slaved hard to supply the Chinese with railways, and clothing, and hardware, and all manufactured articles; and had no leisure, and no fresh air, but good wages, and plenty of bread to eat, and beer to drink. Then the rich people, who under our present system would reap a fine harvest from all this labour, finding England no longer pleasantly habitable, would emigrate somewhere to foreign climes, and would come over now and then to inspect this scene of activity, and source of all their riches; putting on respirators to keep out the smoke, and stuffing their ears to keep out the din; and, as speedily as possible returning to their quiet retreat, away from this busy manufacturing country.

Suppose all this actually achieved: it would be a commercial millennium! To hear people talk, this seems the sort of thing they would really

like,—this the kind of thing which they lament is so slow in arriving. And this would be prosperity for England! This would be "wealth" for the English population! It is a singular ideal.

I have not consciously mis-stated anything. This *does* seem the kind of thing people wish for; not to the full extent perhaps, but to a much larger extent than at present. Any endeavour to preserve natural scenery, and fresh air, and blue sky, and leisure to enjoy life for the poorest native of England, this is unpractical and sickly sentiment.

Practical considerations multiply furnaces, and factories, and labour, and all manner of manifest hardship; and all for what? That is the thing so difficult to understand. I can quite see that the Chinese or Burmese may be benefited by our taking all this trouble for them, but I am quite sure it is not good-will to them which prompts the sacrifice; I can also see that the capitalist who receives the cash, and is able to live in the south of France or somewhere out of the way, I can imagine that he, if he be sufficiently selfish, or stupid (a very good substitute for selfishness), will have a first rate time; and, if they were the only people who wished for the state of things, all

would be clear enough. But they are not: the singular thing is that the poorest classes, the tradesmen class, the great bulk of the people of the country, who have no thought of leaving it to live elsewhere, want it too: or act and talk as if they did.

I can only believe that we have an altogether false standard in these matters. We have lost the sense of the real meaning and value of life itself, and have set up some of the artificial and unessential appendages of life, as the real things to be pursued, the valuable things for which any sacrifice may be rationally demanded. I believe that people's eyes must be opened by higher education; they must learn to set up an altogether different standard of wealth and value, before the world can grow wiser and better, and before the inexhaustible potentialities of the universe can become to us real and actual possessions.

I do not wish you to take my view of this matter, I only ask you to think for yourselves; and if what is now known as the pursuit of wealth then seems to you to be either a melancholy chimera, or else the pursuit of something the precise opposite of wealth, surely you will try yourselves to form a truer estimate of the relative value

of things, and of the true meaning and nature of wealth; and having thus satisfied yourselves that the goal is a worthy one, an end really worth striving for, then by all means pursue it with your might.

Continue to 300

XI

PUBLIC WEALTH AND PRIVATE EXPENDITURE [1]

"PUBLIC WEALTH" means wealth belonging to a community or corporate body; and the possessor of such wealth can utilize and administer it as corporate expenditure. By "Corporate Expenditure" I mean not municipal expenditure alone, nor trades union expenditure alone, nor benefit society expenditure alone, but something of all of them; combined expenditure for corporate ends, as distinguished from private and individual expenditure. I wish to maintain that more good can be done, and greater value attained, by the thoughtful and ordered expenditure of corporate money, than can be derived from even a lavish amount distributed by private hands for the supply of personal comfort and the maintenance of special privileges.

It sounds like a secular subject, but no subject

[1] An Address to the Ancient Order of Foresters at their Annual Gathering in Birmingham Town Hall, on Sunday, 9th October 1904.

is really secular, in the sense of being opposed to sacred, unless it is a subject intrinsically bad; and if the truth be as I imagine myself now to conceive it, the subject I am endeavouring to bring forward has possible developments of the most genuinely sacred character. I shall not have time to develop this fully, but I can make a beginning.

CARELESS SPENDING

First, I would direct your attention to a fact, and ask you to observe how little thought is expended by mankind in general on the spending of money, and how much time and attention are devoted to the earning of it. That may seem natural; it is considered easy to spend and hard to earn. I am by no means sure that it is easy to spend wisely. Men who have much money to spend—and few of us are in that predicament—if they are conscientious and good men, feel the difficulty seriously; they realize that it is so easy to do harm, so difficult to know how to do real good. Charity may seem a safe and easy method of disbursing, and much of it at present, alas, is necessary, but few things are more dangerous: it is an easy salve to the conscience, but it by no means conduces to fulness and dignity of life.

But eliminating men of large fortunes, let us attend to our own case. We, the ordinary citizens, how little time do we find to consider our manner of spending; we mostly do it by deputy, all our time is occupied in earning. It may be said roughly that men earn the money and that their wives spend it: a fair division of labour. They spend it best: and if the man insists on retaining and spending much of it, he is liable to spend it very far from wisely or well.

PUBLIC *v.* PRIVATE EXPENDITURE

I will not labour the point; we get something by private expenditure undoubtedly: we get the necessaries of life, and we get some small personal luxuries in addition. We do not get either in the most economical fashion. Buying things by the ounce or by the pint is not the cheapest way of buying; nor is a kitchen fire in every household the cheapest way of cooking, especially in the summer. Without going into details, and without exaggerating, we must all see that individualism results in some waste. If each man pays for the visits of his own doctor it is expensive. If each man provides his own convalescent home it is expensive. If each man goes on his own ex-

cursion or travels it is not so cheap as when several club together and run the journey on a joint purse. Private and solitary travel may be luxurious, but it is not cheap. A cab is dearer than an omnibus; a private garden is far dearer in proportion than a public park. Of private expenditure altogether it may be said: some of it is necessary, much of it is luxurious, but none of it is economical.

Corporate or combined expenditure achieves a greater result, not only for the whole, but actually for each individual. "Each for himself" is a poor motto; the idea of "Each for all" is a far more powerful as well as a more stimulating doctrine than "Each for himself." Thus already, you see, our subject shows signs of losing its secular character and of approaching within hailing distance of the outposts of Christianity.

THE OBJECTS OF THRIFT

Very well, now go on to consider the subject of *thrift*—not personal spending, but personal saving. What is the saving for? There are two chief objects:—

(1) To provide for sickness, for old age, and for those who are dependent upon us, and whom

we should otherwise leave helpless when we go. This is clearly the chief and especially forcible motive for saving: it is the mainspring and original motive power of this and all other benefit societies. But there is also another not at all unworthy motive, though it is one less generally recognized or admitted, and to this I wish incidentally to direct attention.

The second great motive for thrift and wise accumulation is—

(2) To increase our own power and influence and effective *momentum* in the world.

THE POWER OF WEALTH

The man of wealth is recognized as a force in the world, sometimes indeed a force for evil, sometimes for good, but undeniably and always a power. People often complain of this, and abuse the instinct which recognizes wealth as being such a power. But it is inevitable. It does not indeed follow that great wealth need be concentrated in a few hands, or that one single individual shall have the disposal of it; it is an accidental and, as I think, an unfortunate temporary arrangement of society which brings about that result; but, whether in many hands or in few, wealth is bound

to be a power. It is no use abusing what is inevitable, we must study and learn how to utilize the forces of nature. Wealth is one of those forces.

Why is it so powerful? Because it enables its owner to carry out his plans, to execute his purposes, to achieve his ends. He has not to go cap in hand to somebody and ask permission; he can do the thing himself. He cannot do everything indeed, his power is limited, but he can do much. So also the members of a wealthy corporate body, if they want to do something, if they want to meet elsewhere than in a public-house, for instance, encounter no difficulty, they can have a hall of their own, or they can hire one. Wealth is accumulated savings. Considered as power, it does not matter whether the wealth is in many hands or in few. The owners of it are important people; and if they mean to do good the material accessories are at their command. Like a rich man, a rich corporation has great power. Suppose he wants to bring out an invention, his own or someone else's, he has the means. Suppose he wants to build a laboratory or endow a university, he can do it. Suppose he wants to plant waste land with forest trees, who will stop him? But he cannot do everything. A

genius has powers greater than his. A rich man's power is great, but it is limited; for suppose he wants to compose an oratorio, to paint a picture, to make a scientific discovery, and has not the ability; his wealth is impotent, he cannot do it. No, his power is strictly limited, but it is not so limited as that of the poor man.

THE WEAKNESS OF POVERTY

We are poor men, and some of us want to renovate the Black Country and cover up its slag heaps with vegetation and with forests—a beautiful and sane ideal—but it is a difficult task. I do not own a square foot of soil, nor do most of you. What right have we to go and plant trees on someone else's land? We should be trespassers and, at a whim of the owner, they might be rooted up. The owners of the soil, however, may be willing for the reafforestation of the Black Country, they may give us assistance, they may enable us to carry out the scheme. I sincerely hope they will, but we must go and ask them. Without wealth we are powerless. We see so many things that might be done if we had the means: for instance, we helplessly lament the existence of slums,

we see numerous ways in which to improve cities, we would like to suppress smoke and show how the air could be kept pure for the multitudes herded in cities to breathe and enjoy; but we cannot do it, we are not rich enough. Moreover, if we did, what would happen; at least at first? Rents would rise, and the improved property would become too dear for the present inhabitants to live in. Clear and purify the air of towns,—and they would at once, with their good drainage and fine sanitary conditions, become the best and healthfullest places to live in. Now they are too dirty, then they would be too dear.

But, if the land near all large towns belonged to the community, if we had corporate ownership of land, what could we not do? Then improvements would be both possible and profitable and the community who made them would reap the benefit.

Some day: some day an approach to this condition of things is bound to come. It feels to me almost like part of the meaning of that great prayer "Thy Kingdom come"; and if so we are again not far away from the atmosphere of Christianity.

PUBLIC WEALTH AND PUBLIC DEBTS

For accumulation of wealth to be really beneficial it should contribute to the common weal, it should conduce to well being, and so be worthy of the name of *weal-th*.

The only way probably you and I can ever become wealthy is by becoming corporately wealthy, by clubbing our savings and becoming an influence and a power in the land.

Already I see, by your report, that this organization or corporate body owns more than seven millions: not seven millions free to be dealt with as you like, it is all ear-marked to good and beneficent objects, and all needed for the achievement of those objects; but still it is a substantial sum, and it can increase. Roll it up to seventy millions, apply it to other objects than sickness and death, and you will become capitalists, able to execute your behests, an influence and a power in the world.

Would this be a good thing? Ah, that is a large question. There are always dangers in great capital, it is a serious responsibility; and if badly and domineeringly used, it may become a fearful evil. In unwise and unscrupulous hands,

or even in ignorant and foolish, it is far from safe. But let it come gradually, let it be owned by mankind or by the community at large, and I for one would trust them—we are bound to trust mankind—would trust them at first to endeavour to make a good use of it, and ultimately to succeed in so doing.

I believe in public capital and public expenditure, so it be clean and honest and well managed; everything depends upon that; but in this fortunate city that is already accomplished. What is known as a public debt is really a public investment; and anything not spent in the waste of war should have public works, or elevated humanity, or other good results, to show for it. Then it at once becomes capital, and is no more appropriately called debt; it has not been spent, but invested. "Funds" is a better name for it.

THE ECONOMY OF RISING RATES

That is why I believe in Rates—not altogether in the Poor Rate, for I am unable to feel that the Poor Law is on a satisfactory basis, though it is administered with the best intentions by the guardians; the system is as I think in some respects mistaken, but I will not go into that now;

I only say parenthetically that the Poor Rate I do not welcome—but rates for public works, education rates, rates for municipal and corporate services generally, rates for museums and libraries and recreation grounds and parks and rational amusements, all these I would welcome and wish to grow.

We should not try to economize in these things, we should put our heads together so as to spend the public money wisely and well, and then we should spend it. Private thrift, public expenditure; that is the way to raise a town or a nation in the standard of civilization.

The spendings of an individual, what are they? They are gone in his individual comfort and luxury. The spendings of a community are Capital: they result in public works, in better housing, in good roads, in thorough lighting; they open up the country, they develop its resources, they educate the citizens, they advance all the amenities of existence, in an economical because corporate or co-operative manner.

Good management is required; and that is why you take pains to send good men to the City Council to look after your interests: your interests, not in screwing and economizing, but in

spending wisely and honestly and well, getting the most they can for your money, and looking out for improvements and for good schemes worthy of encouragement. And when they do this well, be ready to trust them with more; see that not only the municipal but the national purse also is properly supplied. Our National Government is for all good purposes miserably poor. I fear there is sad waste somewhere, and that before the taxes can be judiciously raised the sources of waste must be discovered and checked. I trust that already this labour is being put in hand. You have fine public servants who are trying to do their best with an ancient and very cumbrous and over-centralized machine; much revenue has to be spent in various unprofitable ways, wars and other, but in every good and noble direction of expenditure the country is miserably poor. Where it is economical it should be lavish; and where it is lavish it should be economical. That is an exaggeration, but there is a kind of truth underlying it. Our national economy in higher education is having disastrous results, it is a real danger to the Nation. While other nations are investing millions of public money on higher education and research, we prefer to keep the

money in our pockets in order to spend it privately; and the result is that while the State is poor the individual is rich. Individuals are over rich in this country; money breeds money on our present system with very little work, and it is apt to roll itself up into portentous and top-heavy fortunes. The result is, I fear, a state of things that some people say is becoming a scandal. I do not know. But however that may be, I should like to see this wealth owned by communities; I should like to see it in corporate hands and expended for the general good.

UNEARNED INCOMES

Do not think that the original making of a fortune is easy. Most fortunes began by thrift and enterprise; it is not the making of a fortune that is easy: it is the transferring and the inheriting of it that are so fatally easy and so dangerous. If the maker of the fortune himself had the disbursing of it, there would be but little harm done, and there might be much good. No fortune can be honestly *made* without strenuous industry and character. But a fortune can be inherited, *can* be inherited I say, though I hope it seldom is, by a personification of laziness and folly and vice.

That, however, is not my point. My point is that self-denial is the beginning of capital and the essence of thrift—present self-denial for future good. This self-denial for future good you of this and kindred societies are already exercising in a small way, but it is possible and indeed likely that it will come to be exercised in a larger way, and so gradually a considerable fraction of the property of the world may ultimately pass into your hands. Wake up to this possibility, and do not abuse capital or capitalists, for some day you will be capitalists yourselves. Then it will strain your energies to know what to do with it, and how to use it for the best and highest good of humanity—the ascertainment of which is a noble aspect of human endeavour.

I do not expect agreement in all that I have to say, nor do I speak with authority; I am anxious to admit that I may be mistaken; I only ask you to consider and weigh my message, the more so if you disagree, as I know many will, especially in what follows:—

THE CHEAPNESS OF HIGH SALARIES

The tendency of public bodies is to economize in salaries. People look askance at highly paid

public servants; whereas it is just from those that you do get something for your money. You don't get much service as a rule from ordinary shareholders, but you do as a rule from salaried officers. That is the danger of municipalities and other democratic corporations: they will not realize with sufficient clearness that the manager and administrator is worthy of large remuneration, that to get the best man you must pay him well, and that to put up with a second-rate article when you can get the best is but a poor policy, and in the long run bad economy. Cheap men are seldom any good. In a large concern they may waste more than their annual salary in a week. Some people want to pay all men alike. It will not work. It is a subject full of controversy, I know, and I do not wish to dogmatize, but so far as I can see, and I have no personal interest in the matter, I say that the principle of inequality of payment must be recognized—as long as there is payment at all,—and that it is a necessary consequence of inequality of ability.

Some organizations seem to think, too, that the available work of the world is limited, and that you must each be careful not to do too much of it lest work become scarce. The truth is, that the

work potentially required by mankind is essentially unlimited; and if we could only get better social conditions there would be work and opportunity and scope for all, each according to his grade and power and ability.

Stand shoulder to shoulder and help each other, and form a banded community for mutual help, by all means; let all co-operate together, and let not one human being be idle except the sick and insane; but allow for different kinds of work, and put the false glamour of the idea of artificial equality out of your minds. In any organization, as in any human body, there must be head and there must be hands, there must be trunk and limbs: the good of the whole is secured by each doing his apportioned task and obtaining his appropriate nourishment: not every part alike, though each sufficient for his need: each brought up to his maximum efficiency.

And what is true of property is true of personal service also. That which is spent for the individual is of small value compared with service done for the race. It is on the pains and sacrifice of individuals that a community is founded. "The pleasures of each generation evaporate in air; it is their pains that increase the

spiritual momentum of the world." (J. R. Illingworth, in *Lux Mundi.*) The blood of the martyrs was the seed of the Church; it is by heroism and unselfish devotion that a country rises and becomes great.

THE RESULTS OF PUBLIC SPIRIT

Witness the magnificent spectacle of Japan today: the State above the individual; common good above personal good; sacrifice of self and devotion to the community; these great qualities, on which every nation has risen to glory, were never displayed more brightly in the history of the world than now before our eyes. It is a nation which is saturated and infused with public spirit, the spirit of the race, enthusiasm for the community and for the welfare of humanity. This is the spirit which elevates cities; it is this which makes a nationality; it is this which some day will renovate mankind.

A splendid article in the *Times* [now well known] calls it "the soul of a nation," a translation of the Japanese term Bushido. It is a sort of chivalry, but the term "chivalry" does not convey it; our nearest approach to it is "public spirit," public spirit in a glorified form, the spirit which

animated the early Christian Church, so that prison, suffering, death itself, were gladly endured so that the gospel might be preached and humanity might be saved—a spirit which must be near akin to the divine idea of Sacrifice for the salvation of the world. To lose your life as the highest mode of saving it; to lose the world but retain the honour and dignity of your own soul; that spirit which animated the apostles, prophets, martyrs, is alive in Japan to-day. Is it alive in us as a nation? If not, if we have replaced it to any extent by some selfish opposite, by any such diabolically careless sentiment as "after me the deluge," then we as a nation have lost our soul, sold it for mere individual prosperity, sold it in some poor cases for not even that, for mere liquid refreshment, and we are on the down grade.

I trust it is not so, but sometimes I greatly fear it. It is surely not too late to arrest the process of decay; the heart of the Nation is sound enough: the men, as they said in South Africa, the men are splendid. Give them a fair chance, introduce better conditions, set forth high ideals, and be not ashamed to speak of these ideals and to follow them: then we shall find that there is plenty of the spirit of unselfishness still, the spirit which

calls men to harder tasks than momentary spurts of bravery, calls us all to the long and persistent effort of educating ourselves in the facts of the universe, grasping the real truth of things, and then, with patience and self-control, applying our energies to the material betterment and spiritual elevation of the world.

XII

SOME SOCIAL REFORMS [1]

THE necessary preliminary or precursor of wise and effectual reform is knowledge—knowledge both wide and accurate of the state of society and of the conditions of action: though at the same time we must, as Prof. Percy Gardner has said,

"Guard ourselves against a too narrow interpretation of the scientific study of history and bear in mind the great variety in human motives. All attempts at dealing with the problems of poverty have hitherto failed, because they have not taken into account certain psychological facts, so that in many cases they have increased the evil they were meant to remedy."

In fact, the problems before us are so complex, and so strangely intermingled with surprising elements in human nature, that it is easy for people with the best intentions to do harm rather than good; especially, as I myself think, if they

[1] A Presidential Address to the Social and Political Education League in 1905.

proceed to attack an institution or an abuse in too direct and narrowly concentrated a manner.

Nevertheless, whatever may be the faults and foibles of a social expert in detecting abuses and advocating reforms, his aid is indispensable if the mere blind struggle for existence is to be suspended and progress to become conscious and moderately quick. As Charles Kingsley said, adopting words akin to some used by Huxley:—

"For five-and-twenty years my ruling idea has been that the reconstruction of Society on a scientific basis is not only possible, but the only political object much worth striving for."

So to this end a long-continued and devoted study of the human problem, as a branch of science, is as necessary as is the intuitive and energetic zeal of the reformer. The art of government cannot continue to be the one department of activity for which no training is supposed to be necessary. We train doctors, we train engineers, we are beginning to train teachers; some day politicians must be trained too: that is to say, youths must be trained in social studies before becoming legislators; in spite of the fact that in all these professions some few men are born with

such extraordinary ability that training seems almost superfluous in their favoured case. And as a preliminary to training, a body of systematized knowledge is necessary, which must be the work of trained inquirers and social experts, such as are now only beginning to exist. Nor is there any subject in which the result of study and research is likely to be more immediately useful and directly repaying. Most of our scientific applications result in indirect benefit; but in this human region of research the applications are direct and immediate to the advancement of life. To quote Prof. Gardner again:—

"Discoveries in physics, electricity and the like help mankind in certain outward ways, satisfy material needs. Discoveries in medicine may make life more free from pain. But discoveries in human nature may enable whole communities to live at a higher level, may have a bearing upon happiness direct and immediate. . . . And unless our increased power over nature tends in the long run to increase human happiness, it does not seem after all much to boast of. . . . It is a very great thing to be able to carry out one's will in the material world, but it is also important to have within purposes which are worth carrying out. If one has nothing to say worth saying, telegraph and telephone become only instruments of vanity."

EDUCATION OF THE AVERAGE MAN

We are therefore faced with such questions as these: How can the general level of mankind be raised? What steps are necessary to this end? and How far are we fundamentally falling short of the necessary efforts and proper methods now? Is it possible to reconstruct society on a scientific basis?

That ingenious and able writer, Mr. H. G. Wells, devotes himself seriously to these questions, and I believe it is generally admitted that he has provided this country with a good deal to think about.

The construction of a Utopia is an enticing, and I believe not an altogether unprofitable, exercise; because it is often a good practical method of procedure to form an ideal, and then to see how near in practice it is possible to attain to it. That is the way of great inventors; it is, I believe, consciously and admittedly, the method which Lord Kelvin, for instance, has pursued in brooding over his inventions; and, being based in his case upon a deep knowledge of the problems and of possible methods of solution, it has resulted in many devices of the utmost originality.

So it may be with social problems also; but it is not my purpose to-day to attempt to rival Mr. Wells, nor to formulate or even to discuss any Utopian scheme. I want to point out, what everyone is really aware of, how grievously in many respects we fail to organize lives in anything like a reasonably happy, healthy, human way, and then how it is possible almost at once to make a beginning in at least one or two directions, if we are minded so to do. Knowledge is a necessary preliminary to reform, but in the exigency of life people cannot wait, as in the applications of Chemistry or Physics they can, for a fully established and systematic theory before they take action; they must get what knowledge they can, they must encourage experts to devote their lives to serious study and to accumulate and dissect and assimilate facts, but meanwhile they must themselves proceed tentatively and experimentally to put their ideas into practice, to bring them to the test of experience, to apply the methods of trial and error, to learn by mistakes, trying only to make those mistakes as few as possible, not hoping to avoid them altogether. And so must the theory and the practice, the acquisition of knowledge and its application, go

hand in hand and simultaneously; one cannot wholly precede the other, but each must react on the other, amid the storm and stress of actual existence. The practical man and the theorist must live side by side, and both must be active; often, indeed, their attributes can be combined in one and the same person.

Moreover, the knowledge of the expert is not the only knowledge at which we must aim. The education of the average citizen is to be considered. It is no use going too fast for him, no use being too far ahead of the time; anything achieved under those conditions is likely to be upset by the return swing of the pendulum.

Social progress is only sure and lasting when the average citizen is ripe for it, when he is carried along by the reformers and realizes the benefit of what has been done. Society cannot be reconstructed from outside, it must be reconstructed from within, it must in a manner reconstruct itself, or it will be unstable. This is the whole problem, this is the real and noble difficulty in dealing with self-conscious material and free agents. They cannot with wisdom be coerced, they must be led; and this process takes time, and is the reason why progress is so slow. Machines

can be managed on the coercion principle, but not men.

Looked at with seeing eyes this doctrine bears pressing very far; it can be applied even to Divine dealings with humanity, and accounts for the amount of sin and misery still existing in the world. Omnipotence itself could not with wisdom reform mankind faster than they desire to be reformed, nor can it permanently impose upon them conditions which they are incompetent to assimilate. A momentary outburst into intellectual splendour might be accomplished, as it was once in Athens, but it would be followed by centuries of falling back and comparative degradation.

But the time was never so ripe as it is now for the education of the average man. The hopelessness of effecting any permanent reform without his concurrence is the chief reason, indeed, which leads many of us to lay so great a stress upon education, upon real education and the reform of the schools, and upon reconsideration of the orthodox methods of imparting knowledge and stimulating thought and inquiry in use up till now.

IDEALS OF YOUTH

If social problems and difficulties and reforms could be introduced to and contemplated by ingenuous youth, before they become sophisticated by false traditions and imbued with selfish and pecuniary interests, much might be achieved. For it could then be realized how far we now are from anything like an approach to perfection, the true meaning of civilization and social existence could be emphasized, and the desperately backward and uncivilized condition of our present state perceived. It is a matter of common observation that young people have many of them a keen and generous appreciation of, and feel a yearning towards, a more ideal state of things; until they get dazed and bewildered and disheartened by the selfish condition of life as it is, and fall back into the customary routine of conventional concurrence with the general trend of Society.

Take a few instances. What is the customary attitude to foreign politics on the part of our legislators? I do not wish to generalize unduly, but a cynic might say, with just sufficient truth to make us uncomfortable, that our foreign policy is

to let things be, to refrain from studying questions and looking ahead, as long as people are quiet; and only attend when they become a nuisance, especially when they threaten, or seem to threaten, our pecuniary interests. Then, to act in a sudden, spasmodic, excited manner, and enter upon operations which are very costly before they are completed.

Such assertion might be made by a cynical observer; but he would have to admit a few brilliant exceptions, due to our leaders, exceptions which I gladly and gratefully acknowledge. The Anglo-French *entente* is one of them; the Japanese Alliance is conspicuously another; certain honourable dealings with America are a third; and our behaviour in Egypt, both in war and peace, is a fourth. There may be others; and what I wish to point out is that whenever our statesmen and leaders do thus look ahead and achieve something in a peaceful and progressive and meritorious direction, the populace appreciate it; the people are ready for this mode of dealing with foreign affairs, they are generous and hopeful, and willing to sacrifice something for the good of the world; they are indeed usually more unselfish and more "Christian," if I may

use that expression, than our rulers and financiers have imagined them or always proved themselves to be.

Hence, on the principle that the average man must be carried with us if progress is to be permanent, I say that the conditions are hopeful.

I am one of those who are beginning to contemplate the possibility of a national or citizen army, each one in his youth devoting a certain time to the acquisition of drill and discipline and the use of weapons for national defence. I believe it will make for peace, inasmuch as it will bring home the danger and responsibility of war to every hearth in the kingdom; for a people whose ordinary avocations are upset by active service will not rush into it as rashly as do a people who maintain a professional fighting class, whose career and opportunities for distinction are essentially involved in the occurrence of hostilities.

Through the half century of my own life we have fought certain wars which to the best of my judgment we should not have fought. The Crimea was the first of them; few now think that we should have fought the Russians, at the behest of Louis Napoleon, for the purpose of maintaining the domination of an Asiatic race over a con-

troversial portion of Europe, in order to close the natural maritime outlet of a great nation. And the last instance is very recent. I know that there is always something to be said on both sides. I trust that the verdict of history may be on our side, but I much fear it will go against us in several cases. Yet these wars have retarded the growth of civilization and entailed terrible suffering—a depressing thought if no adequate good has come of it all.

On the other hand, I believe we should have put down our foot strongly, and been ready to fight, if need be, in protection of certain maltreated people whose existence we had contracted to maintain. A nation which rushes into battle for selfish causes only, and which refrains, and is known to be certain to refrain, from the expense and trouble of contest for any unselfish or noble cause or in protection of the weak, does not, any more than an individual, earn the respect of the world; nor does it really strengthen its position, not even its sublunary position, among the nations. "There is that scattereth and yet increaseth," in this sphere also; and "prestige" is an asset not to be acquired on the grounds of financial and territorial considerations alone. If

our devotion to material security is too concentrated we run the risk of losing even that which we have. Let the British Empire uphold the right and the truth, and it may hope and deserve to be prosperous and perpetual; let it exhibit itself to the world in purely selfish guise, and decadence will assuredly set in.

I am convinced that young people will realize this; I feel assured that greed and sophistication are acquired characters, and that they are fortunately not transmitted to offspring by inheritance, though by example and precept they may be and are gradually instilled.

CONTROL AND ALTERATION OF ENVIRONMENT

Well, then, take the condition of Society at home. The people for the most part, in Britain, are now aggregated into great cities and towns, and the country is becoming depopulated. Are the cities admirable and attractive places, and are the conditions of existence in town and country such as they might readily be made, with our present knowledge of, and control over, natural forces?

We must answer with conviction, assuredly no!

The towns are subject to a blight of squalor

and poverty and dirt: the West-End may live in forgetfulness of them, but the slums of a town cover a great area, and they are hideously depressing. To think of people living there, year in year out and all their lives, is unspeakably repellent. We who get away, for travel and holidays and change, do not realize all that it must mean towards the dwarfing and degradation of the human soul. The fact that good and decent and exemplary lives are lived in these dismal surroundings is again a most hopeful feature and speaks well for humanity. It proves itself superior to its environment, it dominates its surroundings, and blossoms as we see a flowering shrub sometimes blossoming amidst material ruin and decay.

And what we have to teach, throughout, is that in no sort of way is man to be the slave of his environment. No longer is he to adapt himself to surrounding circumstances, changing colour with them as do the insects and plants. It is not himself which is to suit the environment, but he is to make the environment suit him. This is the one irrefragable doctrine that must be hammered into the ears of this generation till they realize its truth and accept it. The struggle for existence, supplemented by other great facts and

laws, some of them partially known, some quite unknown, has brought us to what we are. It has done its slow and painful and beneficent work. All through the ages of the world's history, the blind and inevitable facts or forces—struggle for existence and survival of the fittest—have been operating, so as to *clinch,* as it were, and perpetuate every favourable variation, which, either by accident or by design, has arisen; and thus has animal nature been confirmed and strengthened and improved, until it has risen to the altitude of conscious and controlling man.

There, however, the function of these blind forces begins to cease. Man progresses now, not by exterminating the weak, but by caring for them; not by wars and fierce competition, but by the unobtrusive pursuits of peace, and by the development of families and firms and communities organised for mutual help and co-operation. And this element of higher progress—already foreshadowed as it was in the animal kingdom—we have now consciously to recognise and intensify, till we land at length in the friendly co-operation and brotherhood of the whole human race.

It is not human nature that must be altered to

suit circumstances, nor need it be adapted to material surroundings; it must be obedient to the laws of nature certainly, but within their sway we have entered on the period of *conscious* evolution, and have begun *the adaptation of environment to organism.* It is thus that all progress in the rearing of domestic animals has been accomplished. The Procrustean system of unaided nature is over; and, under the fostering care of man, results are achieved which else would have been impossible. Hitherto man has applied processes associated with care and culture to the quadrupeds and to the birds, he has not yet applied it to the fish of the sea, nor has he altogether learnt how to apply it to his own species. A beginning of intelligent treatment of humanity has been made, but for the most part men are still left to struggle up against adverse circumstances as best they may, and the weakest still go to the wall. There are some who indulge in the enervating and dangerous fallacy that this is the best way, that a policy of masterly inactivity and *laissez faire* is the best for the race, and that any interference will result in weakness and decadence.

There may be some here present who think so;

for the fallacy still exists among thoughtful men. Nevertheless I wish to maintain that it is a deadly fallacy, and that our constant endeavour should be to continue the process of extermination of this fallacy begun by Professor Huxley in his famous Oxford "Romanes Lecture." The surface of the earth is to be amended by us, the forces of nature are to be first understood, and then curbed, controlled and utilised. Higher aims are to replace mere survival in a struggle for subsistence. We have entered on the epoch of conscious control, and must assume our full dignity as man. As Huxley said, in *Evolution and Ethics*:—

"Social progress means a checking of the cosmic process at every step, and the substitution for it of another, which may be called the ethical process. . . . It is from neglect of these plain considerations that the fanatical individualism of our time attempts to apply the analogy of cosmic nature to society. . . . Let us understand, once for all, that the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it" (pp. 81–83).

"The most highly civilised societies have substantially reached [a position where] the struggle for existence can play no important part within them" (p. 36).

And now a word as to method.

The first thing to learn is that evils are often not to be attacked too directly, that the most obvious and direct way is seldom the wisest or the most effective: the wisest policy is often indirect.

When a gardener sees his flowers droop and wither, when he sees the fruit decay or remain sour and shrivelled, he does not always attend to the blooms alone, nor even to the buds and blossoms: he goes deeper than that, he surmises that there is some canker at the root, and he searches for the parasite that is poisoning or draining the life blood from the tree; or he makes laboratory experiments in vegetable pathology, of a character apparently quite wide of the mark.

So, I advocate, we should deal with such evils as the dirt, disease and drunkenness of our towns, with the perennial problem of the unemployed, and with all the manifold evils which still cling like a canker to our wealth and civilization. We should treat these evils as we treat diseases and cankers affecting fruit, and should seek for the causes deeply and pertinaciously, with the object

of removing them by indirect and permanent means.

First of all, we must bring home the evil to people, otherwise they get so accustomed to it that they begin to think that it is the normal and necessary condition of society. They even quote biblical authority for it, saying, "The poor ye have always with you,"—as if that meant that the grime and wretchedness of city slums were to be always with us (although they do not exist in such countries as Sweden and Tyrol); whereas its real meaning is that poor people requiring help and assistance, people bowed down by trouble and sickness and accident and sorrow, people who require the kindly aid of the good Samaritan, the healing influence of ointment,—these we shall have always with us; and no era would be an era of prosperity from which the sympathy and help of man to man should be a thing of the past. The community of human nature, and dependence upon mutual aid, will be eternal; but to maintain that the grimy and soul-destroying wretchedness of human outcasts, that death by starvation, and the transmission of disease by ignorance and dirt and sin,—to maintain that these are permanently decreed Divine ordinances, otherwise than as the

necessary outcome of neglect and mismanagement, is essential blasphemy.

To realize what a city ought to be—might be, if we thought it worth while to set the ideal before us and strive to reach it—we can contemplate the visions of painters and poets. These are the seers of humanity, and their visions are only the precursors of what it is for us, after laborious generations, to make real and actual. To think that the ideal is impossible is to show a lack of faith; it cannot be achieved quickly, but if each generation will endeavour to contribute its quota to the common amelioration, something like a millennium may arrive before people at present think it at all likely. Nature will co-operate with us: we have only to learn her ways and to set ourselves to work in accordance with natural laws and not against them, and we shall find the task easier than we think. Here is a picture of city life as seen by Burne-Jones, in the form of a design for one of two pictures inspired by Rossetti's poem "The Blessed Damosel." It must not be pressed prosaically into detail, it is a dream city, but it is more inspiring than a smoky slum:—

"In the first picture I shall make a man walking in the street of a great city, full of all kinds of happy

life; children . . . and lovers walking, and ladies leaning from windows all down great lengths of street leading to the city walls; and there the gates are wide open, letting in a space of green field and cornfield in harvest; and all round his head a great rain of swirling autumn leaves blowing from a little walled graveyard." —(*Memorials of Edward Burne-Jones,* vol. i, p. 153).

There is nothing far-fetched or impossible about it. Nature will do her part readily enough towards this picture. It is man's selfish and misguided aims that are at fault, not the nature of things.

And then as to country life, at present it is said to be dull and depressing and monotonous; it need not be so. The utilization of leisure is a vitally important feature, far too much neglected hitherto. I commend the efforts of the "Social Institutes' Union" to your notice. I am convinced that the provision of opportunities for wise utilization of leisure will be a great means of improvement, the greatest opponent of the mere drinking den. Education is doing much for life in towns, it will do much also to make life interesting in the country. In summer it can hardly fail to be stimulating; and in winter no village need be without its electric light, its recreation

room, its library, and even its laboratory, in which winter study may be pursued by the more studious, and much information gained for application to actual husbandry, or to fill the vacant hours of manual labour with worthy thoughts, when the season of long days comes round. A developed system of agriculture is full of interest, but it has been shamefully neglected, until almost the last and dismallest use to which land can be put, in some places, is the growth of crops—the growth of that food on which the whole livelihood of the people necessarily depends.

CONDITIONS OF LAND-OWNERSHIP

The salvation and restoration of land to its right use is a great difficulty. Why do these difficulties exist? What is the root cause of our present disabilities? It is for experts to say, not for me. But in so far as I have been able to form any tentative and provisional opinion, I cannot help thinking that the custom of allowing absolute ownership of land to individuals, instead of to communities, is responsible for a good deal. To me it is somewhat surprising that it is quite legal and ordinary for a person to be able to sell a portion of England for his own behoof. It

does not seem to be reasonable, in any high sense, that a bit of the country itself should belong absolutely to some individual, so that he has the right to cut down trees on it, to dig up the minerals in it, to sell either it or its coal, to lay it waste and desolate as a deer forest, or a cinder-heap, if it so pleases him, and to levy a heavy tax on building enterprise; to do, in fact what he likes with his own, and live elsewhere on the proceeds in idleness and luxury.

I do not say that landowners actually do this, but it is legal for them to do it. That is the system under which we have grown up, and are absurdly accustomed to; and that individuals refrain from exercising their full rights, that they recognize duties and responsibilities and devote themselves to such schemes of betterment as may commend themselves to their intelligence, is all to the good as far as it goes: but I do not think that matters of such vital importance should be left to the caprice of an individual, nor that any abuse of his rights should be permissible.

If ownership of land is permitted by law, the owner should be a trustee, not a parasite. Whether there be any parasites now, merely draining the fruits of the labour of others and

claiming a butterfly existence for themselves and their successors, I do not presume to say, but I conjecture that there are some, though I hope few.

INHERITANCE

Then, looking at society as an outsider, it has long appeared to me that there is another matter that may have to be considered some day—viz., the law of inheritance, whereby a person can acquire a competence and live luxuriously without necessarily doing a stroke of work of any kind all his life. It is not an easy problem, how to regulate inheritance, indeed it is a supremely difficult one; but the idea that life is intolerable without some inherited background or cushion of property, the idea that people may live without working and yet without disgrace, is responsible for much incompetence and some misery. It is good neither for the youth brought up in that idea, nor for those whose labour has to supply him with what he demands: it acts badly all round; and even though the looked-for competence is small, it has contributed to the ruin of sons or nephews in cases known to most of us.

But it will be said, would you have no men of

leisure? On the contrary, I would have no men without leisure. Leisure—time at our own disposal, time to live and do something worth doing, wholly for its own sake—is the most valuable asset in life. All should have leisure, but then also all should work. No one should be idle, completely idle, save on pain of starvation or the disciplinary drill of prison.

But then the term "work" should be interpreted wisely and liberally; it would be no kindness, no improvement, and perfect folly, to insist that everyone should make things with his hands. The world would be cluttered up with useless products: man does not live by bread and furniture and material implements alone, nor even by pictures and statues and works of art alone. The poet, the musician, the artist, the author, the explorer, the student, the thinker, the statesman—all these are workers; and a country, even our country, is not so deadly poor but that it can afford to support people engaged in these and many other superficially unsubstantial occupations. The preposterous error of the French Democracy in executing Lavoisier, because "the Republic had no need of chemists," is hardly likely to be repeated; if it were, then, to any such short-sighted

folly as that, the present conditions of competition and endowed idleness are infinitely to be preferred; because, among the people so provided for, a genius or a saint, of the utmost importance to the race, may here and there arise. The community should have the sense to maintain people of every worthy kind; and if it can be shown that the present indirect plan of doing so is the best and most appropriate, well and good. I do not deny it: I only say that it is a question that demands thought and consideration and cannot be answered off-hand. Not by any means is inheritance always an evil, sometimes it is a great good. The fruitful activity of some strenuous men, William Morris, for instance, and John Ruskin, has been made possible by inherited property. Many of the highest workers in science also have been similarly provided for by their parents or ancestors, and without that aid would have been badly handicapped and perhaps reduced to impotence. Hence the question is a complicated one.

But that being so, and reform being surrounded with difficulties, what is there that can be tackled at once? What reforms are possible when everything is so complicated, and when everybody is

free to think as he pleases, and within limits to do what he thinks right?

Is there any class on which the hand of reform may at once be laid?

CLASSES READY AND WAITING FOR REFORM

I say there are two such classes.

There are the people whom society has for its own protection deprived of their freedom, and, by actual manual force, taken under its own control; and there are the people who for the sake of bare subsistence have voluntarily surrendered their individual freedom for a time. In other words, there are the criminals and there are the paupers. These classes are subject to drill and discipline, and upon them experiments in improvement and organization can be tried.

Now I contend that hitherto, in these two directions, society has by no means yet risen to a sense of its power and its responsibility. It is too deeply imbued with the idea of punishment, too faithless about efforts towards reformation and improvement.

I ask for a serious study of these two great classes, and some perception of the splendid opportunity for direct treatment which they afford.

TREATMENT OF PAUPERS

So far as it is permissible for me to have an opinion, I suggest that we should do well to remove the stigma of disgrace and deterrence attaching to the poorhouse, and regard it as a place not only for maintaining the impotent and aged in fair comfort, as at present, but also for dealing efficiently with the able-bodied of weak character; and so try to convert it into an instrument of instruction and discipline and organization for those mental and moral invalids who are unable or unwilling to organize their own lives. Competent people, who can organize themselves, will stay outside: incompetent people, who cannot organize themselves, who are deficient in energy and will power, will drift inside,—inside the working of the system I mean, not necessarily inside a building,—to take advantage of the organizing power of society; just as workmen enter a factory to take advantage of the organizing and administrative ability of its head.

Very well, by so drifting under the organization and discipline exercised by a community, they acknowledge, or are supposed to acknowledge, failure of a sort: and the same sort of disgrace

attaches to them as attaches to a man who fails in business—no more and no less. It may be their own fault, it may be the fault of their parents, it may be the fault of social conditions; it is a fruitless quest to seek judicially and seriously to administer praise or blame. The medical profession is wise: it does not seek to blame, it seeks to cure its patients. These are the patients of society: in their present state they are useless, and they are very likely deserving of blame. Anyway they have failed, and they require help.

What sort of help? Not material help alone, though that doubtless in the first instance, but intellectual and moral help chiefly. They must be shown how to live, how to work, how to develop their faculties. They must be content to be treated in some respects as children, helpless and sad but not yet rebellious children, for whom life has been too hard. To put them to a hopeless task, like oakum-picking or breaking stones, is to disgust them with labour; to give them things like this to do, for which a machine is the proper agent, if it is ever now done—this treatment is not only folly, it is wickedness. I solemnly believe that it is wickedness; and if in this I am mistaken, I trust that experts—not con-

ventional ones, accustomed and inured to the system and incapable of original thought, but real experts—will point out my error.

We should not try to degrade men, however low they may have sunk: when they come to our house of refuge, our establishment for the relief of the poor, we should seek to raise them, to put heart into them, to treat them kindly and as human beings. Guardians, doubtless, often endeavour to do this, and to administer the law in a kindly spirit, but it is not in accordance with the system: the system aims at exclusion of what are called "the undeserving" by harshness applied all round. Why should society set upon weak people and try to crush them into hopelessness and rebellion? That is not the object for which we pay poor rates. At present the poor rate is rather a mockery: it does not help people till they are quite down and destitute, and then it tries to degrade them. Gentlemen, we ought not to stand this; the time has come for reconsideration and reform. If we could but feel assured that our contributions went to making happier and healthier and more hopeful the poor folk who, either by defective character or defective education or rough street influences or deficient in-

dustry, have drifted into a condition of idleness as bad and useless as that of some specimens of our loafing gilded youth—if we could feel that our poor-law contributions would result in their being helped, disciplined, and encouraged to get their foot once more on the ladder which they have slipped off, so as to earn enough—the very small pittance needed—to keep them from starvation until hope and humanity began once more to dawn in their spirits, if they could be shown a way of escape from the down-grade, on which they are drifting, then each of us would gladly pay the rate demanded.

Moreover, it would be a profitable investment for society. By placing the people on land, on unreclaimed or unfertile land calling out for labour, under skilled supervision, they might, I believe, be made self-supporting before long;[1] but even failing that, some of them could be rescued from the slough of despond into which they have fallen, and prevented from drifting into that

[1] It may be suggested that there is scope for the uncompetitive organization of abundance of cheap labour in works adapted to resist the wastage of English land by encroachment of the sea. But much can also be done in preparation for agriculture or market gardening. The municipal experiment, conducted at Muriestion near Edinburgh, of reclaiming derelict land by city refuse dug into it by the unemployed—thus evolving fertility out of three waste products—is worthy of close attention. It seems to have been most successful.

most expensive of all classes—more expensive to maintain than even the landed gentry, and far less picturesque—the criminal class.

TREATMENT OF CRIMINALS

Whatever may be the case with paupers, concerning the criminal class I am perfectly certain we are doing wrong. We are seeking to punish, not to educate, stimulate, reform. Punishment is not our function. We think it is, but it is not. It comes in incidentally, in accordance with the laws of nature, but it should not be our primary aim. We have a right to protect ourselves, but we have no right to break a man's spirit and undermine his intelligence and character. Solitary confinement does that. Hopeless idleness and degradation do that.

We behave as if we assumed that criminals are already so low and degraded that nothing we can do to them will damage them further. We do not really assume anything of the kind. We know that such an idea is false; but society prefers not to contemplate the conditions of prison life, and leaves the painful subject alone. The government of gaols is a convenient form of pension for Officers retired from active service; and a severe

military form of discipline, we appear to hope, may be the right sort of thing. Very well, then, I think it is not; I ask for reconsideration of the question, and I believe that it will be found that, however *penally* successful it may be, it is a thoroughly bad and incompetent system of administration from the point of view of any good outcome or profitable result.

Prisoners should be put under industrial conditions, and should be organized into useful members of society. Remember they are not the incompetent weaklings of the casual ward: some of them are men of ability, some have succumbed to temptation, some of them have been born and bred as criminals, as to a profession, and have never had a fair chance. Some, doubtless, are brutal and hopeless, but these are the exceptions; these should be treated medically and psychologically, like other interesting abnormalities: the whole system should not be organized on their behalf. Criminals should be made gradually self-supporting, their labour should be useful; and self-respect—the natural outcome of self-support—should be encouraged. Unless they are reformed should they be set free? It seems stupid to release them in order knowingly to reinforce

the ranks of the criminal classes. Prisons should be reformatories, but in order to be effective they must be humanely and wisely administered; it is a most difficult task, demanding earnest and self-sacrificing and constant attention; and the present system should be radically overhauled.

It is not so much emendation as revolution of the present system that is needed: and if any Trade-unions, or other corporate bodies of workmen, object to the utilization of prison labour and the production of useful commodities, even for internal consumption—then it should be made clear to those Trade-unions or other bodies, that the object of prison discipline is not primarily the manufacture of goods, but the reform and manufacture of human beings from the refuse of humanity—a utilisation of "shoddy" eminently worthy of this Divine Factory, the Earth. They must be taught that so long as a man retains a spark of humanity, and so long as society takes away his liberty and makes itself responsible for his future, no consideration of trumpery material, no question of immediate apparent profit or loss, should prevent every effort to turn him out a respectable and worthy citizen. Nor do I believe that the trade-union leaders would object

to this, if it were properly presented to them; any more than they object to rate-aided technical evening schools, municipal educational institutions, and other machinery for swelling the ranks of the competent and the trained and the respected artisan. Workmen leaders have not shown themselves selfish nor foolish when properly informed. Sometimes they lack information, and then they naturally take a wrong view; but even selfishly, opposition would be unwise. The people have to be maintained; surely something should be got out of them, they should not be maintained in idleness. Enforced idleness may be a cruel punishment, but it is an expensive one to apply.

I hope that any initial opposition which workmen may feel to the proposal will disappear when they realize:—

(1) That the test to be applied to every social institution and to every social scheme—the way to see whether an alteration is really useful and valuable or not—is to consider what is the ultimate end and aim of existence, what is the ultimate product for which activity and labour and enterprise are worthily expended. Then they will perceive that the worthiest output is, humanity,

fulness of life, high and noble manhood; there is no product which excels that in value; the manufacture of all else must be subordinate to the manufacture of that.

That is the first proposition which they should realize; and the second is:—

(2) That the great social organizations called workhouses and gaols might be manufactories of human beings,—hospitals, as it were, for the ills and warpings, not of body but of mind and character,—receptacles for refuse and converters of it into manhood and womanhood. Let them realize even the possibility of such a change, and they will welcome any arrangements which could bring about this much-needed reform.

It must surely be held that direct agencies—Prisoners' Aid Societies, and the like—are but palliatives, temporarily necessary no doubt, but quite incompetent to deal with the root of the evil. There is not time to deal with people when they come out of prison, broken and disgraced: it is too late then. No, it is all the time, the months or years, that they are in prison, that furnishes the opportunity for getting at them and putting them through such a course of study, discipline, and wholesome and interesting work, as

shall fit them to take their place in the army of citizens when they emerge.

To say that the army of workers is already overstocked is no answer: if it were, it is equivalent to throwing up the sponge and admitting that this planet cannot support its present population. It is absurd to suppose that; when as yet science has not been to any large extent applied to agriculture, when scientific organization and material have never yet been seriously applied to human problems, when the bulk of people even of good position are seriously under-educated, when we are only emerging from the region of individual competition and *laissez-faire,* only just escaping from the time when legislation was governed by class interest, and when the populace, though nominally free, were really serfs, and when, as some urge it should be even now, the whip of starvation was held over them lest they should fail to do their quota of work to maintain those above them in leisured ease.

Time enough to acknowledge defeat and take refuge in despair when a few centuries of really intelligent study and unselfish legislation have been tried.

A beginning of the new state of things is being

made. Municipal and socialistic enterprises are in the air. They are running the gauntlet of criticism and suspicion, as all good things have to do, before they are purged of their dross; undoubtedly they must justify themselves, and by admirable management must make good their claim to be the beginning of better things; but this I will say, that never was the outlook so hopeful. Never were all classes so permeated by the spirit, not the phrases but the essential spirit, of brotherhood and co-operation; never was there such universal recognition of the beauty of the spirit of real and vital Christianity, far above the differences and dogmas of the sects.

With the extension of local self-government, call it devolution or what you will, legislative progress may be more rapid; the best men will throw themselves into public service with more heart and energy than now, when in an overloaded and centralized Assembly progress is so slow and the machinery so old and cumbersome that the output is quite incomparable with the time and labour involved in getting it through.

[Added later.] There will be a further advantage in dividing the country into a moderate

number of local self-governing Provinces, each presided over by a Senate. Experiments in social legislation can then be tried on a smaller scale, and so with less disaster in case of failure; while in case of success, the experience gained can be applied elsewhere. The principle of Federation is far from alien to the English-speaking Race.

XIII

THE POOR LAW [1]

During the three-quarters of a century which have elapsed since 1834, the process of evolution has changed every department of human life, and has modified the whole social organism. But the officially recognized methods of dealing with the poor, with trifling exceptions, remain unchanged. The guardians of the poor have had laid upon them the thankless task of administering the law of 1834, under a condition of affairs to which it is totally inapplicable. It is, indeed, doubtful whether the principles of those days were ever really suited to any condition of society.

Now, at length, a Royal Commission has reported in unanimous favour of "widening, strengthening, and humanizing" all these social arrangements which have hitherto been grouped together in one comprehensive and overweighted system. Any levy made upon society for relief of the helpless, and for assistance of those who

[1] Written in 1909 with reference to the Reports of the Royal Commission.

are still capable of exertion and self-help, ought to be a public charity of a peculiarly well-administered and efficient kind. Its officers should be trained for their task, and experts should elaborate the plans upon which human action in the various branches could best be taken. The conscientious brutality of economic officials should be checked.

If only the public could feel that its poor rate was wisely and helpfully and humanely expended, surely the tax would be felt not as a tax but as a welcome opportunity of indirect service, and we should pay it with satisfaction and even joy as our contribution to the help of weaker brethren. At present the condition of the lowest of the people is literally an ache felt by the sympathetic among all classes: it hinders legitimate enjoyment, it makes life ugly, and it is only tolerated by shutting it out from thought. The poor rate does nothing to mitigate this feeling, for it is an impost with an atmosphere of repulsion surrounding it on all sides. It is actually intended to be even more repulsive to the receiver than it is to the giver! Reformers who see their way to a better and more hopeful system of treatment must surely be welcome.

But it is not to be supposed that legislation

alone, however enlightened, nor administration alone, however efficient, can do everything. Human beings are the object of attention, and they can only be dealt with by human beings. The spirit of the willing and self-sacrificing worker must be alive, whether in official or in voluntary organization, and there will always be great need of personal service. In this sense—in the sense of the weak, the sick, the unfortunate, the distressed—the poor we shall always have with us. But the deadly modern evils of deteriorating and grinding poverty, with insufficiency of the simplest means of life in the midst of plenty, we need not and should not have to encounter.

Moreover, if workers are to be efficient, they must be trained, they must have knowledge and experience, and must take pains to acquire them. Universities and colleges are beginning to recognize the need for instruction of this kind, and are establishing not only lectures but practising schools wherein some preliminary power of dealing with problems of this sort can be acquired. Lastly, the urgently needed reform—the revolutionary reform—of our present Poor Law system should not be regarded from the point of view of party politics. It too vitally concerns the

welfare of the nation to be treated as a subject in which party advantage can be gleaned. It should be dealt with in the same spirit as that in which foreign politics are dealt with—all citizens as well as all statesmen combining to think what is good for the country as a whole, and endeavouring to pursue a consistent and continuous policy of beneficent activity and foresight. Fortunately the recent Commission was appointed by one Government and has reported under another, and its leading members are recognized as social authorities by prominent members on both sides of the House.

The only fear is lest the feeling of satisfaction at the report, and at the consensus of opinion in favour of reform, may lead to a sort of apathy, as if what everybody would like to see accomplished would get itself achieved without effort. The bulk also of the documents which have been issued tends to militate against their being read. Hence a careful and balanced summary of their proposals, such as is contained in a volume called *By what Authority,* written by my colleague, Professor J. H. Muirhead, with the motto "The destruction of the poor is their poverty," will, it is hoped, be useful.

XIV

CHARITY ORGANIZATION[1]

We must all regret that work of this kind is necessary, but so long as charity of the pecuniary sort is needed by the unhealthy condition of society, so long it will need administration. There may be too much charity of one variety or another, but of the true kind there is never too much.

True charity helps people to help themselves, it strives to give everybody a fair chance; it lends those who are in danger of falling a helping hand, and does not wait till they are down. A great deal of this true charity and personal help has no eleemosynary character at all. Education, freely distributed, comes under this head; so do nursing the sick and taking care of the disabled. This kind of assistance is needed by all grades of society. It is personal service, not necessarily connected with money, and it would have to go on equally if there were no such thing as money; though under present conditions and customs of

[1] An Address to the Charity Organization Society at Birmingham in 1901.

society, money is needed to aid its performance.

Now, of all forms of charity, that connected with the Poor Law is the least satisfactory. So deeply is this recognized that it is not thought of as charity at all. Yet it is a kind of public or impersonal or official charity. It is the provision which society makes, not always successfully, against anyone starving in its midst. Poor Law relief reaches only the failures of society. In order to qualify for relief they must be absolute paupers, and they must continue to be paupers in order that the relief may continue. If they get employment, or rather if they are known to get employment, or if they begin to rise,—if in any way they get on the lowest rung of a ladder of progress, and do not lie successfully about it, they become disqualified for relief from the rates. Their pauperism must be complete, or pretend to be complete, and it must be public and unshamed. It is a miserable system on which to administer the public charity of the nation; but it is the system, and has been the system for some time, though it must be depressing to the good men and women who give their time and energy to Poor Law guardianship. No one can pay the poor rate with any feeling of satisfaction, hoping

that his money may really help somebody; for it does not "help," except in some epoch of dire emergency, and then it needs supplementing. It does help indeed to keep body and soul together, but under conditions which make existence hardly worth while. It cannot help people to rise; if they rise they rise in spite of it; its tendency is rather to keep them down, to ensure their being absolute failures. This is no fault of the guardians, or of the officials; it is the fault of the system. The essence of the Poor Law is that the failures of society are to be maintained at public cost, but only on condition of the loss of their self-respect. Loss of self-respect is the test—that and the general unpleasantness of surroundings and the personal time-wasting applications necessary. If people are poor enough to put up with all that, they are to be assisted, otherwise not.

True charity would, however, seek first of all to prevent people from falling into this last state, and, next, would try to raise them out of it. Assistance by the Charity Organization Society begins where Poor Law relief leaves off. When people make an effort and rise, even by very little, from absolute pauperism, they require assistance; and that assistance they can obtain

here. Much of the effort of private charity is devoted to preserving self-respect, and keeping people away from the need of public relief.

Private charity organizes itself so as to assist the deserving: public relief is organized so as to maintain the worthless. A curious division of labour this, and a demarcation hard to make. It is difficult indeed to tell who is deserving and who is worthless. A line of demarcation between deserving and undeserving is one impossible for human beings to make properly. "Use every man after his desert, and who shall scape whipping!" I trust that this Society does not act as a pharisaical invigilator, and set up as a hard and therefore necessarily unjust judge. The work of enquiry is most delicate, and should be conducted with the utmost care and method. If a mistake is made it should be on the side of leniency, because the result of the opposite mistake may in some cases be deadly.

But I say it is unreasonable to deny assistance except to those with virtue and strength of character enough to qualify them for the directorship of a company or a seat on the Bench. Any such demand can only lead to hypocrisy and lying. The Poor Law tempts people to lie about their

property; the C.O.S. enquiry, unless wisely undertaken, tempts people to lie about their virtues, to make themselves out, not paupers, but what Kipling calls "plaster saints."

Doubtless the poor must be at fault somewhere, or at least they must be unsuited to their environment, but the environment itself is by no means faultless and free from blame. Who is? What we seek to do is to recognize this, to expect no high measure of desert but some measure of hopefulness, and to give friendly and sympathetic aid, after careful and strict enquiry,—an enquiry conducted in no pharisaical spirit, but simply to guard against sheer imposture and professional mendicancy—that abominable vice which does more than anything else to sap the strength and choke the stream of private charity. Part of our work is to undertake private enquiry, and to report to members and would-be donors concerning individual cases, whom, when the report is favourable, they gladly help. All our help is to be given in a personal manner, and so long as the Society works on these lines it deserves generous support.

For myself, and I expect many another busy man, the existence of a Society like this, in which volunteers and skilled officers seek to understand

and relieve distress judiciously, is a great comfort. If there were no such organization it would be heartrending to resist appeals even in the street, although one is assured that miscellaneous and random gifts of that kind do no good at all, but rather do harm to the self-respecting poor by encouraging a mendicant class who absorb the outcome of the good nature of the public. But the "spare a copper" of the professional mendicant is sometimes ingeniously improved until it becomes very hard to resist; and if we made no other effort to cope with the poverty which we know exists round us, poverty not by any means always due to vice or slovenliness or sloth, we should be bound not to resist even these appeals, for fear lest we should rebuff the small percentage of genuine cases which would have no other access to us. To inveigh against indiscriminate charity, and to do nothing else—to do nothing to relieve real distress, and to make no effort to improve the state of society which causes the distress—that would lead to mere hard-heartedness and greed. Every self-respecting citizen must recognize this, and will doubtless act accordingly.

Meanwhile we of the over-worked classes have to leave the problem of the unemployed not ex-

actly unnoticed but relegated to a sort of background. The existence of this background of civilization is a painful thing. I wonder sometimes that our men of leisure and influence do not proceed to tackle it in a more whole-hearted manner, with a view to getting rid of it. We cannot be a light-hearted and fully enjoying nation so long as this background of avoidable misery and grinding poverty lies close all round us. We have got so accustomed to it that, perhaps, we regard it as inevitable. It is not inevitable, because in some countries it does not exist. It exists in the most highly-developed countries, but it is not a necessary consequence of their development. It is a consequence of their lop-sided development, it is a sign that on one side they are not developed at all. So long as violent poverty exists in the cities of a new country like America, for instance, the extraordinary excrescences of gigantic personal fortunes over there are a deformity, they are no more a sign of health than are the growths of elephantiasis, or the tumours and swellings sometimes seen on plants. A crop of sickly and stunted ears, with here and there some swollen and redundant growth, is not a crop to delight a farmer.

As civilized or specialized society is now constituted, large fortunes tend automatically to increase; but life is hard for the average man, even for the employed clerk or artisan in good health, —to take a high class of worker. He has to work many hours a day in order to get a living, and there is very little margin in case of illness. Moreover, most of our handworkers are busy on someone else's concerns. Even in the best cases it is *our* houses they are building, or *our* gardens they are tilling, or *our* furniture they are making; they will not have the pleasure of using what they make, or of knowing who uses it, nor can they take the personal interest in it which a man feels in making things for his own or his friend's use. It is very seldom that the thing made is sufficiently a work of art to carry with it any individual reputation or recognition. This may be inevitable, but it is a fact to be recognized; and, though it never becomes very prominent, it does, I believe, constitute part of the dulness of existence, which seeks to relieve itself by drinking-bouts and other animal lapses. And when we remember how early in the morning this "other-people's-work" has to be begun, and how strenuously it has to be gone on with all the working

day, I, for one, never feel surprised at what is called the "idleness" of some members of the working class, nor is it to be wondered at that a certain proportion drop out of the race and gradually sink till they have to be relieved by either public or private charity.

Charity organization and City Aid are not the last words on the social problem,—there is a better kind of organization open to statesmen and social reformers,—but they are words of need for the present, until those greater, those really vital, reforms can be brought about.

We owe a debt of gratitude to the workers in this field, who carry our share of social burdens as well as their own, and immerse themselves in this mass of misery and incipient or threatening degradation, in hope that they may raise individuals out of it. We are all waiting for the time when the mass itself, by wise statesmanship and a more widespread feeling of social responsibility, may gradually cease to exist, and when the face of English towns and of Englishmen may wear a happier and gladder expression, as if life contained some promise, some hope higher and more invigorating than the dull spiritless existence of the average man to-day.

XV

SQUANDERING A SURPLUS[1]

THERE are no party politics in this prosaic article, and no party feeling. There is nothing peculiar to any one party in the mania that has infected the nation as a whole for many years,—the idea that the only thing to do with a surplus is to disperse it, that the only use of strength is to discard it. Both parties are alike in their unquestioning deference to a system which years must have ingrained into permanent officialdom, and which may be supposed to possess the approval of the nation.

Can it be because we are so used to manufacturing goods for no object but rapid distribution of them, that we think the process appropriate to income also?

Taxes, it will be said, must be kept down. Yes, certainly, when they impinge harshly and are severely felt—as part of the income tax certainly is,—but taxes need not be kept below the

[1] Written in 1906 about recent Budgets, and published in the *Contemporary Review* for July in that year.

standard needed for revenue, nor need they be remitted easily and gratuitously, when they pinch nobody, merely because there is a surplus.

One would have expected that a surplus should be an occasion of rejoicing, and a feeling that now at last some of the many good objects that have been waiting will have a chance of being attended to. But no; the question "What will the Chancellor do with it?" means not how will he spend it, but how will he succeed in getting rid of it, and how will he ensure that it shall not occur again?

The Government of the country does not bethink itself what quiet and unobtrusive enterprises may be aided or initiated. It has no standing committee for scientific advances and the furtherance of knowledge; nor has it one for the encouragement of art, and for all the many methods of raising the status of a nation. It does not even seriously set to work to consider how to improve the condition of the people, to check the manufacture of human wreckage, and to temper the consequences of rapid modifications in civilization to hand-workers and the unguarded poor. Such a book as that on *Industrial Efficiency,* by Dr. Arthur Shadwell, points to reforms in many directions, but the national surplus

is never available for any such purposes; and without means reformers are helpless.

Our national income is chiefly consumed in providing bare necessities, such as the defence of the Empire and the repression of crime; a minimum of support being given to other objects only when they are noisily clamorous. And when we have a surplus we pour it down the gutter, as if it were a valueless or noxious product of civilization.

If a registration duty on corn which has not been grown by the inhabitants of the country has been collected with ease and naturalness for years from those who imported it—so that an income of over two millions a year is readily forthcoming—that at once becomes an opportunity for lavishness; that income can be forthwith discarded.

If it has been the custom to charge the owners of underground England 1s. a ton for any part of it which they sell to foreigners, so that the national exchequer has reaped a little benefit from the export of that national material for which foreign navies are clamouring—behold another opportunity for misplaced generosity; this very natural source of income is forthwith to be

dried up. Henceforth either private individuals, the so-called "owners" of the coal, will reap an increased profit, or else foreigners will get their coal cheaper; there is no other alternative.

I wish to express myself forcibly on the subject, because either it is right and just to behave as we are behaving, or else it goes rather near to lunacy.

Municipalities sometimes do bethink themselves of public service, of open spaces, of picture galleries, of museums, of local educational institutions, of improved methods of locomotion, and what not, besides attending to necessaries such as gas, water and electricity; and they are accused of extravagance. In some cases no doubt they might manage things more wisely, but at any rate they do attempt to manage them, and I never heard of their being afflicted with a surplus. If they were, they would either do something with it or else lower the rates.

But a Government surplus in recent years has seldom been applied effectively even to lessen indirect taxation. If all the tax were taken off some one commodity, tea, for instance—something definite and substantial of that kind—the loss of income might be lamented, but it could

be urged as necessary and justifiable. But these fidgety readjustments of duty, it stands to common sense, are apt to be largely taken up by dealers,—affecting chiefly the re-arrangements of stock and the haggling of the market; or, at best, merely promoting the consumption of more fashionable grades. They cannot effectively benefit the consumer in the way of appreciably relieving his poverty. Moreover, it is almost certain that if we were to set to work seriously to bethink ourselves what reforms really are wanted, what enterprises might be set on foot, and what improvements in the condition of the people could be effected, extreme slavish penury could before long be struck out of existence.

It is impossible to deny this with any force, because the experiment has never been tried. All the attempts to benefit the very poor have been *direct*—by charity, by trivial remission of taxation, and such like; but direct methods are seldom efficient: the proper mode of tackling all such problems is indirect, and must be the result of a wider and higher outlook; it can only be accomplished when proper authorities, guided by expert knowledge, are put into action and empowered by the necessary financial means.

It is all nonsense to behave as if we were nationally poor. A couple of millions per annum, which would amount perhaps to a farthing in the pound of our aggregate national earnings, could be expended easily on enlightened objects each year of peace, without conscious effort on the part of anybody; and people would feel they were getting something for their taxes. The need for extreme economy is not really felt, so long as there is no waste and so long as something tangible is obtained by the expenditure. At present it is resented because there is so little to show for it beyond necessaries. Expenditure in right directions would be popular enough.

In the current discussion on the Education Bill, for instance, it has been noticeable that scarcely anyone has urged, as an adverse argument of any weight, the expensiveness of the extra million a year involved in carrying out its provisions; everyone rightly feels that the question is solely whether an improvement can be effected or not. If a substantial improvement can be attained it would be a pity to forgo it merely because it is not cheap. The same thing could be asserted, still more confidently, about the much-needed expenditure of two millions on

higher education and research. Properly expended, as we may hope it would be if nationally provided, such a sum would command services of the highest order, and speedily justify itself not only as a good bargain but as a brilliant speculation.

Why should we pay taxes and get nothing for them but bare necessaries? Are we never to use a surplus for the good of the country, for developing its possibilities, for encouraging all their energies on the part of its citizens? At present, what the people get, besides necessaries, for the larger part of their contribution to the national exchequer, is some pleasure in the Royal Family, and some opportunity for spectacular display in army and navy. But all this is common to the rest of Europe; it is on what we do over and above this that the status of the nation depends, so far as it depends upon material accessories at all. Of course, material resources without the *personnel* would count for nothing; but we have that, indubitably we have that, although some of it we may have managed to crush. Individual character and energy are, and have been, and will remain, among the highest of our assets: the longing for service and the enthusiasm of humanity,

are tightly strung and are full of nerve and muscle; but they are sadly enfeebled by a pitiful deficiency of sinew—their efforts are frustrated by "that eternal want of pence which vexes public men."

The world, as managed by man, is a strange spectacle: it is full of earnest desire for the amelioration of society and the good of mankind; private people are willing to give not only their labour, but largely of their means also, to help on this cause and that; but in spite of all this admirable effort the world seems smitten with a mania for just spoiling every effort at improvement by withholding the financial condition of success. In the midst of any amount of self-sacrificing labour for the good of the community, this is the blight. Every public and beneficent enterprise is hampered by poverty, and is left to the capricious goodwill of the benevolent.

Organized corporate expenditure is mistrusted; people prefer to expend their wealth privately, and to do things casually and wastefully rather than co-operatively; so they have grown into the habit of giving away large sums to such objects as appeal to them, and of objecting to the equivalent taxation of others,—except in the rather

comic form of "if 99 others will do the same"—a formula which shows that a rational instinct is only latent. By our present plan all the best citizens are mulcted heavily, though voluntarily, while the selfish ones escape with a minimum; and even against that they clamour, not for the legitimate reason that it is perhaps wastefully administered, but that it is required for administration at all.

At present it is the fashion to sustain essentially national enterprises by the grotesque and time-wasting machinery of meetings and speeches and circulars and touts. Over and over again we are pestered by solicitations for private donations and subscriptions to this and that good object, in addition to our compulsory disbursement in the way of taxes; and we seem to think that the wasteful and unorganized and capricious channel of private munificence is a good way to manage charitable undertakings. As a matter of fact it is a very extravagant method and gives rise to much overlapping.

Some men are asked not only to give but to speak on platforms and persuade others to give. The objects are often good ones, but the demands

are so heavy that they would amount to an income-tax of 19s. 6d. in the pound if they were yielded to. Any prominent man who gave to all the objects that righteously appeal to him would be reduced to penury. Why cannot he pay his taxes with a good will, and feel that something will be done with the money by wiser heads than his own, or by his own, too, in consultation with others?

The essentially national subject of the health of the people is being taken up by an admirably intentioned "League," which sends round the inevitable hat to increase the taxation of the public-spirited and well-disposed—that is, of just those whose money anyhow would do good and be usefully employed. The best of the citizens are being taxed almost to impotence by this constant devolution of national burdens on to individual shoulders. Another circular is now going out for the much-needed study of criminology and a reformed treatment of criminals. But how is a subject like that to be dealt with by private benevolence? There is a remarkable industrial movement also, in an early stage of development, claiming more and better education for working

men and women—a movement possibly of profound historic significance, if it takes root and flourishes.

Many public-spirited persons are anxious to set the higher education of the country on a more wholesome and substantial basis, and a large amount of young energy is seeking an opportunity for training and for investigation; but they have to beg fruitlessly, as if they were engaged in some charitable undertaking. Half the energy of university organization at the present day is consumed in thinking not how best to do the work, but how to get the money wherewith to do it at all.

Agriculture, again, the feeding of the people, the reclamation of unfertile soil, bacteriological problems connected with dairy work and with manures, the stemming of diseases in plant and animal, the study of blights and pests of all kinds, and, perhaps most important, the discovery of a mode of increasing the fertility of our soil until it can compete with virgin soils elsewhere and feed the inhabitants in case of need—all these problems are awaiting greater scientific knowledge; they are well within the scope of research, and there are trained men who would undertake

the research for a pittance, if they had the material appliances; but nothing is done, save where some enlightened individual expends his private fortune, as well as his personal effort, in making some attempt to examine into the causes of things.

Then there is the whole subject of pathology, and the investigation of obscure diseases. Here, ever since Pasteur, is territory crying out for exploration: discoveries must be lying ready to be picked up, almost. Splendidly trained young fellows will sacrifice their lives in eager wish to get at the root of diseases which kill people like flies, but they are hampered by lack of means. In tropical medicine something has been begun, largely by private and university enterprise, but there are many other branches also. I cannot think that people really prefer to die, or see others die, of cancer rather than pay for a proper investigation of it.

We have a superstition that by getting the money out of charitable individuals we are getting something for nothing. That is an illusion; something is not got for nothing; the question is, first, whether certain work shall be undertaken; and, second, how it shall be paid for; for paid for it must inevitably be.

I feel sure that some result—meteorological and other—would result from the electrification of the atmosphere on a large scale. Growing crops might be assisted; rain might be produced; fog might be dissipated. No one can tell for certain what would happen until the experiment is tried; it would be costly, but laboratory experiments sufficiently justify the attempt, and the result may be one of considerable importance in some regions of the British Empire.

I do not touch on housing questions, and the unemployed, and underfed children, and old age pensions; for all these are difficult and painful subjects, the treatment of which demands detailed knowledge; but unless we apply wisdom and enterprise to public expenditure, the nation will have to immerse itself in wretched problems such as these, which it ought to have overcome long ago: else it will become decadent.

I shall be told, what at any rate I often tell myself, that finance is not my business, and that I had better stick to my "last." But then I cannot but remember that my business is to cobble at the higher education of a part of England, and to try and waken up a portion at least of the old country to a sense of her vital deficiency in this re-

spect. In carrying on this business certain materials are necessary, and those have never yet been adequately supplied, notwithstanding the quite extraordinary exertions of localities and of individual citizens, and the partial recognition of those exertions by Chancellors of the Exchequer and their advisory committees; nor is it at all likely that they will be adequately supplied during my life-time. That being so, it is easiest to remain quiet, take what is given one, ask no questions, and do the best one can; or rather it would be easiest if, at sight of all there is to do, and of the good men and true who are waiting and anxious to do the work, it did not occasionally become intolerable to witness the flinging away of money which would raise the nation in the scale of civilization: yes, and raise civilization itself. For it is just the upper or surplus expenditure which would do good. It is just this that a rich nation ought to afford—this is its weapon by which it can peacefully surpass others. By the judicious administration of its superfluous revenue it could contribute its quota towards elevating the standard and increasing the spiritual momentum of humanity.

XVI

THE PRODUCTION AND SALE OF DRINK [1]

THERE are times when in the distress and bitterness of man's soul he finds a sort of refuge in utter misery, and in abuse of everything around him. Sometimes it is his own trouble that brings him to this pass, sometimes the suffering of others, sometimes it is a contemplation of all the wretchedness in what might be a world full of brightness and beauty;—sometimes, on the other hand, it is little more than a temporary fit of indigestion. Whatever be the cause, the result is painful. It is hardly for us to judge whether the feeling be a sin or only a weakness, but no one can suppose it to be a healthy or desirable condition; and, to take a special instance, it is a bitter spirit which sees in the produce of the soil nothing but the instruments of man's abuse. Unhappy is his state who, on passing through the hop-fields of Kent, can do no better than curse the graceful things

[1] Written in the Rhone Valley in 1908 when a Licensing Bill was under discussion in England.

on account of the uses to which they are put. In such a spirit, even the grapes, that in Southern Europe seem to embody so much sunshine and joy, yielding the wine that makes man of a cheerful countenance and refreshes him after a day's toil,—even these can be condemned as conducing to evil.

But it is a terrible pity thus to blacken the face of nature. No vice should be associated with the gathering of the kindly fruits of the earth, nor with the making from them of the fermented liquors which can be preserved till the due time comes when we may enjoy them. These things are serviceable to man,—it is not the drinks themselves that should be reprobated,—reprobation should be kept for the conditions which adulterate and render noxious the liquid, and for all the other conditions which tempt man to take more than is good for him. One of these conditions is said to be the mode of retailing to the multitude, whereby social intercourse and comradeship can only be obtained in places where custom requires the ordering of drink. But a more potent circumstance is the daily life, which is often so dreary and monotonous that forgetfulness is sought in a bewildering of the senses, through what then

becomes a sort of drug, inasmuch as it is used not to refresh or invigorate but to blunt and stupefy. In so far as this is the case, the blame rests mainly on the conditions enshrouding the lower average of civilized humanity—the badness of the homes, the dullness of factory work, the monotony, the apparent stupidity, of existence, the scarcity of harmless recreation, the lack of education and interest in life, the ugly depressing wilderness of mean streets, the unrelenting toil without hope or outlook beyond the present;—even the weekly wage, to be spent within the week, with no eye to the future, and yet with no security of tenure,—even this must have a demoralizing influence, not perhaps so trivial as may at first sight appear.

It may be true that adults who *want* to drown their cares and befog themselves, should be able to get what they want, unless they are so diseased that society thinks it safer to put them under restraint. Mere physical compulsion or prohibition is never an ideal condition; the reform of the soul is the only reform of permanent value. So long as the wish for excess or for any other vice exists, things are not healthy; and abstinence

imposed by others can only be regarded as temporary medicinal treatment, not as a radical cure.

But no artificial inducement or temptation to excess should be permitted by society. Whatever may be said in favour of our present system of distribution of drink—the system, namely, of licensing private persons to retail it for their own profit, and so to thrive on the excess drinking of the community,—it will not be denied that there are a number of earnest people who think it has turned out ill, and who desire to reform it.

Let us suppose for a moment that people who urge reform are partly right, and that the system of retailing is bad; or that there are too many retailers, too much active competition, and some high-pressure due to exorbitant rent. Let us assume any of these details, without at present going into the question of whether particular allegations are true, or whether any of the practical changes suggested would do anything to mitigate the evil. Let us assume merely that all is not well with our public-house system—that there are some evils connected with it which demand treatment and mitigation and reform. And then let us go on to ask in what way does

reform of the conditions of sale affect the producer of the drink? How does it affect the hop-growers and the brewers? Does it interfere with their industry and manufacture? Does it prevent brewers from still producing good wholesome beverage, and supplying it to the retailers? Need a change in the system of retailing hurt them?

All that it can do is to alter the amount consumed: it may diminish the consumption. But surely they agree that at present too much is consumed. They cannot really wish for national drunkenness. They would not desire to thrive on a national vice. No, I am sure they would indignantly repudiate the suggestion and forcibly rebut any such accusation.

Very well, then, they can go on making their drink better and wholesomer than ever before. There is room for improvement; except, perhaps, in the highest qualities. We have not got a cheap average liquor in this country equal to the German beer. What can be more refreshing, after a long day's tramp, than a draught of wayside lager? Sound healthy stuff,—so plenty of exercise be taken. Yes, there is still something to be learnt about brewing; and some universities study it, and teach the principles which underlie

it—the principles of malting and fermentation, and all the other scientific details. German Universities do; and one, even in this country, is to my knowledge doing so.

A capital thing! Baking, and brewing, and cooking, and cleansing, and all the ancient homely human arts, should surely be studied scientifically, be practised intelligently, and be done as well as possible. Let us take the fruits of the earth, and make the most of them; let us wrench them away from destruction and devil-worship, and use them to glorify the Giver of all good things. Bread and wine,—are they not things of sacramental efficacy? How dare any man curse either of them—unless he is himself so crazed with the misery and degradation he sees around him that he may perhaps be excused.

But, it is urged, the conditions of retailing are bad, and must be changed. By all means; there is nothing divine about *them.* They were devised by society, and by society they can be changed. Who shall object to reasonable reform? The retailers? Yes, they may: they may think their trade will be ruined, they will ask for timely notice, that they may turn their attention to other things, —may aim at becoming purveyors of food also,

and of other kinds of drink; may enter, perhaps, in some cases, another kind of trade.

Even with time to look round, the change may fall a little hard on them. True; but if they can realise that it is in the interest of the nation they will acquiesce. It is a little hard on a man in the reserves, sometimes, after he has settled down to a peaceful home industry, to be called out and sent to a seat of war. But it is for the good of the nation—or so he hopes—and he acquiesces. It is hard sometimes, so we may presume, when a coal-pit accident calls for volunteers to risk their lives to descend into foul atmosphere and encounter heart-rending sights. The demands of the community are often more than a little hard upon individuals; but individuals nevertheless rise to the occasion, and are honoured and it may be blessed, accordingly.

People do not cry out when called upon for sacrifice for the national good; a spirit of emulation arises. And even though the accident or the fire has been the result of criminal carelessness, even though the war is a mistaken and unjust war,—yet their country has entered upon it, they do not stop to reason why,—they obey orders and they do their duty.

And in the present instance I do not accuse the retailers of complaining if notice is given that their annually renewed licence may cease to be renewed after a certain date. We do not hear so much outcry from them; we hear it from, or on behalf of, the strangest people—widows, and clergy, and people who, one would have supposed, were quite independent of licences for the sale of drink. We hear it also from brewers and producers of liquor, but especially from shareholders, who, being numerous, can accentuate the clamour. But what have all these got to do with it? Whether the change proposed by the present Government is beneficent or not is a proposition that can be argued on its merits, but I confess that the opposition and outcry from vested interests makes me suspect that it is. If so, I trust that there will be plenty of power to proceed in spite of outcries.

But, although it is essential that the community shall be at liberty to manage its own affairs, interference with any legitimate trade or manufacture is always to be deprecated, unless really necessary, and should only be undertaken with due circumspection and consideration. So if it can be shown that the Government proposals

are deleterious to the community, if it is really believed that the present system is righteous and beneficent—blessing both him that sells and him that drinks—then by all means let the clamour become intelligent, let it display the subtle poison lurking in the proposals, and put them to an open shame.

XVII

THE SMOKE NUISANCE[1]

It is very appropriate that The Royal Sanitary Institute should have joined with the Coal Smoke Abatement Society to summon this conference, held under their joint auspices; for nothing can be more insanitary, in the long run, than the sun-obscuring atmosphere in which we artificially arrange to live. Those who try to imagine that coal smoke exerts a disinfecting influence are deceiving themselves. The amount of disinfectant fatal to disease-germs would assuredly also be fatal to higher organisms; and, besides, who wants to live in the midst of a plague of disinfectant, diffused through the common atmosphere, any more than in a plague of anything else?

Moreover, coal smoke contains many other products: besides coal tar, asphalt, manures, and useful material, it contains sulphurous acid, an ingredient of the most noxious character, which speedily becomes oxidised into oil of vitriol. But

[1] An Address to a Conference on Smoke Abatement in Dec. 1905.

all this is well known and commonplace, although it can hardly be repeated too frequently so long as the barbarous combustion of crude coal in a savage and unorganized manner is permitted in the midst of the semi-civilization we have so far attained.

Assuming that people are awake to the evil, the problem is to find a remedy. One remedy that has been suggested is the electrification of the air on a large scale, a plan which I have brought within measurable distance of application, and believe to be the appropriate method for dealing with river and sea mists and other temporary obstructions to traffic, and in general for dealing with fogs of a non-avoidable kind. It ought also to be useful for the deposition of valuable metallic and chemical fumes, the product of manufacturing processes. This last is most certainly true.

But as a permanent method of dealing with town fog caused by imperfect combustion it would be a very expensive method. It is expensive to produce a town fog, and it would be expensive to dissipate it. The double expense ought not to be tolerated. The right way of dealing with a

town fog is not to produce it. If it were only country mist it would not be nearly so deleterious: it would be disturbing to traffic, but it would not enter houses nor lungs; consequently it would do no particular harm, moreover, it would soon be dissipated. But the fog which contains products of imperfect combustion is in the first place far denser, in the second place far more readily formed, and in the third place much more permanent. No ordinary warmth will evaporate it, and it retains its character even in houses and in lungs, where it causes a dirty and damaging acid deposit.

The right plan is not to produce it, that is to say, not to permit imperfect combustion in large cities, but only to permit combustion planned and executed in such a way that no half-burned products shall escape; and likewise to insist that the combustible material shall attain a moderate average of purity, the amount of sulphur especially being kept down, since sulphur is even more noxious when thoroughly burned than when half-burned or not burned at all, thus constituting an exceptional case requiring special attention and treatment.

PROBLEM OF COMBUSTION

To take the problem of combustion, therefore, there are three things to be attended to—

I. Purification of the material to be consumed.

II. The proper means of effecting its complete combustion, under conditions of easy regulation and avoidance of dust and dirt.

III. The utilization of the heat due to that combustion, without waste.

I. The scientific and satisfactory combustion of crude coal, as it is dug out of the pits, is an impossibility; it ought first to be subjected to some chemical treatment. Its solid and its gaseous constituents ought to be separated from one another. The solid constituents in the form of coke, when properly made, are of exceeding value for smelting and manufacturing operations; and it is the solid portions which will contain the ash and dirt. Other products of its destructive distillation are of high value.

The processes involving the use of solid fuel

should not be carried on in a big city, but should group themselves round a coalfield, so that the cost of carriage may be small. The gaseous product, on the other hand, readily lends itself to purification and chemical treatment, and can then be *easily transmitted to any distance,* and there burned in a scientific and proper manner under easy regulation, being turned on and off as wanted.

Another scientific method of dealing with coal is to turn almost the whole of it into gas, *i.e.,* all except the ash, by a judicious supply of air and steam, and then to utilize the whole of this gaseous product, purified up to a certain point. Gas of this kind, sometimes called water-gas, sometimes producer-gas, sometimes Mond-gas, according to various details of its preparation, can be made very cheaply and plentifully; but its large amount makes purification of it rather more difficult, and moreover it has not the same heating power, bulk for bulk, as coal-gas proper possesses, without so great an admixture of nitrogen. However, all those details are matters for careful consideration. There are advantages and disadvantages in every plan that has been suggested; but there is not one plan for the combustion of gas that does not

far eclipse the uncivilized and essentially savage method of heaping a pile of crude coal together and setting a light to it.

Consider what the burning of house-coal in a city means—

1. The getting of coal in the pit.
2. The raising of it to the surface.
3. The loading of it into railway trucks.
4. The unloading of it on wharves.
5. The shovelling of it into carts or sacks.
6. The carrying of it on men's backs or wheelbarrows, and storing it in coal cellars.
7. The shovelling of it into scuttles, and carrying about the house.
8. The putting of it by hand on to fires.
9. The distillation of a great part of it up the chimney, and the half-burning of the rest.
10. The raking out and carrying down of the ashes.
11. The carting of them away and dumping them to form the foundation of a future house.

A long and troublesome series of operations, even apart from the fouling of the air, which has not been mentioned, but which is the worst condition of all.

Now consider what the supply of gaseous fuel would entail—

1. The getting of the coal as before.
2. The conversion of it into gas, either at the bottom of the pit or near its mouth.
3. The conveying away of the coke and the manurial products to where they are wanted.
4. The transmission of gas in great pipes to the distant town, just as water is now transmitted; with such occasional pumping stations as may be necessary, driven by the power of a small portion of the same gas.
5. The underground distribution of all this fuel, and its utilization by the turning of a tap, in a manner which will insure complete combustion, with no smoke, no ash, no dirt, no trouble, and no residual product to carry away, either in carts, or clothes, or lungs.

Against all these conveniences we have to set the influential and constantly-encountered parrot-cry, "We do not like gas fires." The people who say this do not realize that every coal fire is to some extent a gas fire, though a very bad one. When coal is put on, a quantity of it is necessarily turned into gas—impure and badly-made gas, but gas at any rate; which before long catches light and flames, burning with a smoky flame, but burning and giving what is called a coal fire, though it is really a gas fire, the gas being made on the premises, and made badly, and only half burned because mixed with carbonic acid from the red-hot material below.

There is some justification for the prejudice, of course; and the justification is that when people speak of gas fires they think of the imperfect arrangements at present in vogue for burning gas at 3s. or 3s. 6d. a thousand; burning very little of it therefore, and burning that imperfectly, sometimes without causing sufficient draught in the chimney to carry away the products of combustion, which therefore enter the room. When the products from a *coal* fire enter the room people say the chimney smokes, and regard it as intolerable; but when the same thing happens from an

imperfect gas fire they are liable to abuse gas fires in general, as if the defects were a necessary condition of their existence. Moreover, some people go so far as to put a gas fire into a chimney which has troubled them by smoking, because, the products being invisible and somehow less noxious than the coal fire products, they think they may be tolerated; though at the same time the reputation of the gas fire suffers irretrievably.

None of these things would happen if gas were supplied in large quantities, for use all day for cooking and heating purposes, at a very low price. Sufficient would then be burned to make a good chimney "draw" properly; and the general use of such arrangements would stimulate invention to the production of appropriate gas fires, such, for instance, as some of those used in Pittsburg, where natural gas is, or was, cheaply available and where no one thought of burning coal.

It would seem to be wise for municipal authorities, or others interested in gas, to superintend the proper erection of gas fires, and to encourage their use by supplying them cheaply and inspecting them gratis if inefficient.

II. But now what are the conditions of complete combustion? First of all there must be no cold

surfaces to interfere with ignition. Gas must be raised to a certain temperature before it will ignite, the simple theory of a flame is that the combustion of each portion has to ignite the next; and it cannot do that if the temperature is lowered beyond a certain point by cool solid conductors introduced into the flame. In many domestic grates there is far too much iron: there ought by rights to be none, nothing but non-conducting material, within reach of the flames; otherwise the portion of the flame in contact with the good conductor is necessarily extinguished, whether visibly extinguished or not, and the material escapes unburned.

Because the products which escape up the chimney are invisible it does not follow that there has been complete combustion. Many of the products of incomplete combustion are gaseous, and it is just as wasteful to allow chemically combustible material to escape unconsumed as it is to allow heat to escape when it has once been generated by combustion. This fact is, however, often forgotten; and so long as all the heat generated is utilized, it is thought that there can be no waste. On the contrary, there can be very much waste, and in many cases there is. This

matter is important and can be illustrated by experiment. It is easy to extinguish a flame by a cold surface. The miner's safety lamp depends on this very fact.

The avoidance of cold surfaces in open fireplaces and stoves is not difficult, and there is no excuse for such surfaces there; nor is it difficult to avoid them in many manufacturing processes, such as the baking of pottery, and other furnaces dealing with incandescent material. But there is one great application where the introduction of cool surfaces into the flame seems almost unavoidable, viz., the *firing of boilers*. It is to be hoped that gradually gas-engines will replace steam-engines, and enable us to dispense with the rather primitive and unsatisfactory arrangement of obtaining power by the boiling of water. It is *impossible* to transfer heat with real economy from a furnace into a boiler. It is usually thought to be sufficient if all the heat generated is absorbed by the boiler, though even that is never fully accomplished. But suppose it were accomplished, there would be two great sources of loss still left ignored: one is the escape of unburned material already mentioned, and the other, and much greater in amount, is the drop

of temperature between furnace and boiler. Concerning the last item there is much to be said, but briefly this: that it alone entails loss of a great amount, not of heat but of available energy,—more than seventy per cent. of the whole,—for which there is nothing whatever to show.

Another condition for complete combustion is the adequate supply of air, unmixed with carbonic acid or other material. If enough air is not supplied, then the fire, stove, or furnace becomes a sort of gas retort; the only difference being that in a gas retort no air is supplied at all, and the products are simply distilled away unburned. This happens in the early or black stages of a coal fire, but it is especially liable to happen in closed stoves and in other furnaces with doors. A quantity of coal is put on and gives off gas which bursts into flame, then the door is shut, the flame promptly goes out, and the gas is distilled up the chimney. If the door is opened it may catch alight again with a small explosion. Consequently the attendant takes care not to open the door until the gas is all gone, and he is left with nothing but smouldering coke. Then he can open the door and repeat the process. The amount of senseless incombustion that goes on

in common hand-fed stoves is something almost incredible, and only to be accounted for by a recognition not only of the dense ignorance of uninstructed human beings, but of their obstinate stupidity also in being unwilling to learn, and thinking that their own habits are perfect and unimprovable.

Furnace stoking is managed much better, for its evident importance has directed a considerable amount of scientific attention to it. It is known that fresh fuel must be introduced either under or in front of a burning and red hot mass, so that the products of distillation may be raised up to combustion temperature before they escape. It is known also that sufficient air must be admitted if they are to be properly burnt, and that this air ought properly to be warmed by waste flue heat before introduction. Automatic stokers are made continually to feed in fresh fuel in the right place and way, but probably no automatic stoker can compete with highly intelligent hand feed. Stoking is an art, and a good stoker is a skilled artisan well worthy of appreciation.

In boiler furnaces, however, there is this difficulty, that if too much air is introduced combustion is too perfect, and the flame has insuffi-

cient *radiating power*. Moreover, even though the air is previously warmed up, as it ought to be, it exerts a considerable cooling influence, the cooling being mainly due to the great bulk of nitrogen in proportion to the active ingredient of the air.

III. Thus we arrive at the third of the fundamental things to be attended to in the problem of combustion—the utilization of the heat. The utilization of the heat produced in boiler furnaces is most important, and demands illustration.

HEATING BY RADIATION

The right way, and indeed the only way, of conveying heat from a flame to a cool surface is by radiation. It is *impossible* to bring a flame into real contact with a cool surface: the flame is extinguished where it touches, and a layer of non-conducting gas necessarily intervenes, across which the heat *can only pass by radiation*. Now, a luminous flame is a far better radiator than a blue flame. Radiation is emitted from incandescent solids much more plentifully than from any gas. Accordingly a luminous and somewhat smoky flame is necessary inside a boiler, unless the walls of the boiler are so thick or so covered with studs that the surface exposed to the flame

may become red-hot and above the temperature of ignition. In that case the flame need not be extinguished, but may play upon them properly. This is a condition hard to satisfy, however, and so in some cases a luminous and to some extent smoky flame is necessary, and the combustion must be completed by air introduced beyond the boiler and before the smoke-stack.

A better plan is to introduce special solid material into the flame and keep it at a white heat so as to utilize its radiating power, on the principle of the gas-"mantle." A mantle radiates far more heat than even a luminous flame, and immensely more than the blue flame of perfect combustion; but the blue flame is the right one for keeping solid materials thoroughly hot, and these solid materials may in some cases be the walls of a combustion chamber, provided that the boiler surfaces are exposed to its glare. I shall not mention any specific device; I am dealing only with general scientific principles, but it is well known that more or less efficient methods of effective boiler-firing are growing in number. For steady work some of them suffice, but the difficulty of regulating the combustion of a coal-fed boiler under *variable* conditions is excessive; and

whereas with a gas-fed boiler it would be easy to turn the gas on and off, with a coal-fed one the fire has to be banked up and kept in a black condition when not wanted, which is exactly the condition for smoke and destructive distillation without combustion.

There are many more things to say, and some points need more detailed treatment. Boiler furnaces and annealing furnaces, where comparatively cold masses have to be heated, constitute the only really difficult problem. Separate combustion chambers should be used for tubular boilers, so that cold surfaces shall not put out the flame. The radiating power of solid particles in flame is important, but there are ways of supplying such solids without smoke, though smoke is the easiest method when you are burning crude coal. So the main moral is: Don't allow crude combustion of coal in towns, but supply them all day long with cheap gas from a distance.

XVIII

COMPETITION *v.* CO-OPERATION[1]

THERE is a deadly fallacy abroad that competition is always a good thing, and that without it life would be harder and worse than it is. I call it a fallacy, and thereby doubtless beg a large question: I wish to treat it as a fallacy, and if therein wrong to be enlightened.

Economists I believe teach, or have taught, that competition is healthy, and that if you destroy it you sap the springs of energy and reduce life and civilization to a less developed state.

Without the spur and stimulus of competition the man of business would not be so early or so long at his office, would not work at fever heat all day, would not watch with such anxiety every opening for a market and every fluctuation in prices; and as a consequence trade and commerce would not flourish as they do. Or, as I should prefer to put it, other and less able and energetic

[1] Read to the Philalethian Society of Liverpool in 1894.

people could make a livelihood without so keen a struggle.

I wish to maintain that many kinds of competition, so far from benefiting us or increasing our wealth, are among the curses of civilization, and that substantial progress will be impossible till they are got rid of. That competition increases our true wealth, in the sense of weal or well-being, I suppose few would be hardly enough to maintain; but it is questionable whether it even conduces to material prosperity—such prosperity as the economists themselves contemplate.

What is the good to me that I can buy a hat in any one of twenty shops in the town; I don't want twenty hats. I don't want to be bothered with a great selection of hats. One good shop is enough. I don't mean that it might not have local branches for distribution, just as it might have carts, but one system of management is enough, and by it hats could be sold at a fair price.

When I buy a cake of soap or a pill, why should I pay for a number of posters on tramcars and hoardings, or—incomparably worse—for large boards set up in country meadows, emphasizing its merits. Pay for them I certainly must, since

it can hardly be held likely that someone sets up these boards from philanthropic motives, being really anxious that you should use only the very best, and putting himself to great expense to let you know which it is. [Boards disfiguring the landscape along railway lines are growing more numerous. Can it be that anyone buys the products thus detestably obtruded! At one of the leading theatres in Birmingham the audience is similarly insulted, by a lantern display of advertisements on the curtain, during an interval between the acts. It is amazing that people stand it.] All advertisements, all cadging and touting and commercial travelling, must be paid for by the consumer. Everything must be paid for by him; and part of this everything is due to competition, though some of a travelling agent's work is helpful.

The halfpenny book postage to Russia and America is astonishing, though I suppose not remunerative. A letter can, however, be profitably carried for a penny from here to Aberdeen, and delivered with regularity and promptitude. How could that be done if we had a number of rival carriers all touting for custom, if different patterns of postage stamps had to be advertised,

and if the price of them were liable to jump up and down according to some fantastic law of supply and demand?

The only possible use of a fluctuating price in stamps would be this, that they might become objects of speculation, and a number of human beings might be maintained by strenuously watching the market and buying or unbuying largely at every fluctuation; a crew of sweaters whose futile occupation would in the absence of competition be gone.

But, it will be said, if you don't have competition you will have monopoly, and surely that is worse?

I don't know that it is worse; it is clearly worse in the obvious sense, but then it is so much easier to deal with. That society should allow itself to be ridden by a monopolist, only shows that society is an ass. When an abuse has only one neck it is not difficult to deal with.

But there is no doubt that, at present, society is in a state of lethargy or blindness. As a whole it is only in process of acquiring eyes. Either it has not yet grown the sense, or its eyes have been bandaged all these centuries. Lucidity is all that is wanted, and there are signs that it is coming.

A little book by Robert Blatchford called *Merrie England* is one of the signs. It does not strike a high note; there is little ideal about it. Others have painted Utopias; this tries to see things as they are, to tear some of the blinkers from the eyes of society. Brutal and blundering I fear it will be for some time after the bandages are removed. A period of revolution is never pleasant to live in, for folk who want peace and quiet, but it must come. It need not be bloody, like the French, or the impending Russian revolution—the evils are not irremediable enough for that,—but it will be a time of upheaval and unrest. Perhaps we are in the beginning of it now.

The recent scarcity of coal opened some people's eyes to the blind folly of permitting the underground wealth of earth to become private property and aggrandize the family happening to own the surface. And this "owning of surface" is a matter that will not brook long delay.

Thus, then, with monopoly I say an awakened society will make short work,—but how can it deal with competition?

How without it can it secure that soap, for instance, shall be both good and cheap? How supply the enterprise that has evolved the article

of Pears or Lever? How raise humanity from the crude yellow bar?

Well, it is a simple matter. I assume that the production of soap is a chemical process, presided over by a chemist; presided over at any large works by an actual chemist, usually imported from Germany (quite properly so, since they are better chemists than we are); and all the improvements are really made by that gentleman, who is paid a very modest salary and is seldom a partner with a share in the profits.

Now then, suppose the firms making soap were really a social community, with no private ends to serve or fortune to make, but managed the concern as a postmaster manages his department; and suppose the soap were not felt to be quite up to the mark, what should the nation do? Why should it not pay a competent chemist, and provide him with suitable appliances, to make experiments and devise a better material? Why should it not, if he succeeded, give him a peerage?

The power of society to stimulate individuals and get excellent work out of them is something stupendous when it chooses to exert it. What labour and harassments will not be gone through for a simple knighthood? What toil and danger

and hardship is sometimes endured with no recognition but a medal—an iron cross perhaps—and sometimes not even that; ten shillings from the poor-box sometimes!

Emulation is not competition.

Emulation is wholesome and right as a stimulus. It is not the beef and the pudding of life, but it may well be considered the salt and the mustard.

Competition is the wrangling of savages round a table at which they might sit at peace and pass each other victuals; it is the grabbing of the dishes as they are brought on by the waiters of Providence—the laws of nature; it is the filching from weaker neighbours of their portion, so that one is hungry and another is drunken.

Emulation is the aspiration of a soldier to lead a forlorn hope, the desire of a student to make a discovery, the ambition of a merchant to develop a new country or establish a new route. Competition is the snarling of dogs over the same bone.

Emulation is the desire to do a thing better than it has been done by others. Competition is the desire to do instead of others that which is now equally well done by them.

That one University or College should emulate

another, is wholesome enough; that it should send touts with handbills for distribution in her gates or corridors, that it should underbid and seek to ruin its sister college: that would be competitive.

Co-operation is the rule at the meal-table, co-operation is the rule at college; and what is the result? Meals are an enjoyable time of reasonable converse, and collegians have leisure wherewith to pursue their studies beyond anything demanded of them by their immediate functions; they are encouraged to take their place in the advance guard, among the pioneers of human knowledge.

Well, to return to my fable concerning the attainment of quality and cheapness without competition; having got the good soap, several varieties of soap for different purposes, soap that won't wash clothes and soap that will, then let it be on sale at convenient places at a properly fixed and reasonable price. If there is any doubt about the price that will pay for the material, the labour, the organization, and the distribution, then, once more, let society pay an arbitrator (what is a judge but an arbitrator), and let it be fixed for ten years, or twenty years, or any reasonable time; and for that season let the nation clear its

mind of soap and all that appertains unto it, and think of something better.

But, with such a system as that, the needful soap would be made and distributed with so great ease and simplicity—as postage stamps are made and distributed now—that for every dozen men now employed perhaps six would then be enough, or else the dozen need only work at soap for a few hours a day and use the rest of the time in some other way; while an army of advertisers and travellers would lose their occupation.

But is that an evil? Their occupation was, by hypothesis, useless—is useless labour a blessing?

Simply and straightly, all useless labour is a curse. Of all the labour that man doeth under the sun, how much is useless; how little is really serviceable to the true objects of life!

Use their time in something better, I said,—and the ready scoff leaps up as to the way the working classes use their leisure now.

Too true, but what then; whose is the fault; must it be always so? If so, it is an arraignment of the Deity; perhaps necessary, but not lightly to be undertaken.

Did He make human nature of this low order, or have we made it so? Think of the life of the

working classes. How should the term working man be defined? There are a number of grades; and of the highest artisans I do not speak. Taking the term in its lowest denomination, it signifies those engaged in dull occupations in which they take no interest. They are not a lovely or inspiriting spectacle. They will make, I fear, shocking bad masters, and the books addressed to them are rather wretched reading. But, whether we like them or not, there they are, and they form a large part of humanity. How much of their unloveliness is the fault of their work; not of the work itself, but of their mode of employment and remuneration?

When I am looking over a great bulk of examination papers, I am one of the working classes, working for pay and nothing else. Were this my life work, without hope of release, I too might be liable to get drunk, or do anything else that was the idiotic fashion of the time. When I am writing a book or giving a lecture or trying an experiment or making a calculation, I am not one of the working classes. The work is interesting, and I like to do it well. So it may be with many of the higher artisans. So I know it is with some. Very good then, theirs is a happy lot.

They have no need to repine, and they do not. The labour we delight in not only physics pain, but immensely prolongs endurance. Put a man on a bicycle and he will go blithely for hours or even days; put him on a treadmill and he is dead beat in twenty minutes. The action is much the same. Measured mechanically the rate of working is similar. To your Political Economist of old it would be all one. But in spite of the Political Economist there is such a thing as soul, spirit, verve, zest. In a word there is life, and this the Political Economist in his theory of living has omitted.

When a professional man or a merchant is sarcastic about the Eight Hours Bill, and how many hours *he* works, he is talking egregious nonsense, and I suppose he knows it. When a man is his own master, one of "them as has coats to their backs and takes their regular meals," working, therefore, either for relaxation or for luxuries, he can work twelve hours a day if it pleases him. And even if he takes up the occupation of a workman for a time—a gentleman, let us say, finds joinering, or ploughing, or even stone breaking, a healthy and not unpleasant occupation for a few hours or days—he need not jump to

the conclusion that to do nothing else for ten hours a day throughout life would also be a pleasant and satisfactory occupation for a developing human being: for that would be neither lucid nor fair.

That professional men do work hard, however, is true enough; and the fact should silence those who hold that without the stimulus of hunger, and the misery of those dear to you, no work would be got out of mankind. On the contrary, of every high and decent sort of work, *more* can be got from a man well fed and happily circumstanced.

Did Sir Andrew Clark, or Sir Henry Thompson, or do some of my readers, work themselves to death for the sake of filthy lucre? I trow not. The lucre in all cases of high and noble work is an adjunct, an accessory; it is among the things that are "added unto you."

And as for low and ignoble work, let us have less of it. Let us, indeed, if so it may be, aim at having none of it.

But mind that scavenging, or tailoring, or house building, is not low and ignoble work; nor is any other mode of really serving humanity. Some of the work of a surgeon is little better

than scavenging in point of physical pleasantness. Whatever view we take of mankind, it is clear that the majority are not great artists or great philosophers or great anything—there will always be plenty to do the simple humdrum weaving and bricklaying and carpentering. Let it be done honourably and peacefully and pleasantly, without the spur of starvation and the goal of the workhouse. They, too, are ministers of humanity, to be honoured as doing good work after their kind. The really low and ignoble work is the useless work, the work deadly to the spirit and dwarfing to the intellect of man. Work such as this exists in all too great plenty at present; exists, some of it, among what are conventionally styled the upper and middle classes; and the world's rewards go to the doers of some of this kind of work.

But if we are to look for a regenerated humanity—if life on this planet is ever to become pleasant, invigorating, and genuinely happy—none of such workers are wanted. If they must exist in the universe, if souls of this calibre must find some spot for their development, let it be on some other planet, not here.

But this is a vain contention; there are no such

souls by nature. It is we who grow them. There are, I fear, a few criminal and mad distorted souls—there are no gambling, touting, scamping souls by nature; or I hope there are not.

But if so much work is knocked off, and rendered unnecessary, how are folk to get food?

Even as they get food to-day; out of the soil. Is agriculture an unnecessary occupation? It is the one occupation which we fools are abandoning; flocking into anthills to do every other thing but that.

Agriculture is a vital art and industry and science. How has the science of it been neglected! the reclamation of barren soils, the increased fertility of others—it matters not much whether in England or Canada or elsewhere—can furnish food for millions more than at present exist. There is no lack of food at the banquet, if only the guests would cease to scramble and snatch but would pass things reasonably.

The food supply would come just the same if every atom of needless and unholy labour were obliterated. And if the food is there, the people can be fed. If the clothes are there, the people can be clothed. If the houses are there, the people can be housed. Housed and fed and clothed

they are not at present. With all this struggle and toil and fierce competition, the result is a depressing state of destitution for a large mass of mankind.

A momentous social revolution waits to be accomplished: fortunate are they who feel fit to lend a hand towards its achievement.

In conclusion, I suggest the following propositions:—

1. That much of human labour is unnecessary.

2. That unnecessary labour is that which provides neither for

The necessities of the body;
The enlightenment of the mind;
The enjoyment of the soul; or,
The development of the spirit.

3. That much of this labour would automatically cease in the absence of competition.

4. That the stimulus of competition is apt to spoil the life even of the successful man, by diverting his energies into useless channels and tending to degrade his character, while for the weak it makes life impossible, and for the average man a severe strain.

5. That by friendly co-operation all needful

work could be better accomplished, with less friction, than at present; that life might become simpler and more enjoyable, not only for the few of the fortunate classes, but for the many of the overburdened,—of whom all but the criminals (including the criminally lazy, who are by no means confined to one class) might and should be reasonably happy and healthily intelligent even on this planet.

6. That a fully developed life is a happier one, and a better training for future existence, than a dwarfed and stunted life.

7. That co-operation tends to promote such development, while competition tends to retard it.

[This early Article has been put into circulation by a Liverpool organization, but originally it was a paper read at a private discussion society, and for that purpose was worded strongly and one-sidedly. The central theses, however, and especially the summary of conclusions, still seem to me true.]

XIX

RUSKIN'S POLITICAL ECONOMY[1]

THE untoward theoretical basis on which Society has for so long been founded—a basis of individualism and competitive accumulation—is believed to be responsible for many evils; it must certainly be held responsible for diverting the heaven-sent genius of John Ruskin from his primary task—the enlightenment and education of the human race in the perception of beauty and the religion of Art—and inflicting upon him the thankless and burdensome rôle of a prophet amid a faithless and perverse generation. He became penetrated with the conviction that he must at all costs get his message delivered to a dislocated world; and, until he had so disburdened himself, no unrestrained enjoyment in natural beauty and artistic excellence was any more possible for him.

The year 1860 marks a turning-point in his life. Up to that time he had written about Art and Architecture almost exclusively; but about 1857

[1] An Introduction to a volume in Dent's Library.

we find his thoughts turning to what he called the Political Economy of Art, and troubling themselves not only about the spiritual meaning of human works, but about the conditions under which they were produced and distributed, and especially about the mistaken ideals which were rendering true spiritual meaning impossible.

Lectures on these subjects, delivered at Manchester in 1857 and published in the same year, were afterwards republished under the somewhat sarcastic title of *A Joy for Ever, and its Price in the Market.*

But by 1860, the colour of his thoughts had acquired a sadder and deeper tinge. He no longer limited himself to the conditions underlying the production and distribution of works of Art alone, but began to brood over the conditions determining the production and consumption of commodities of all kinds. He was led to perceive that the ultimate test of varieties of production and consumption was their influence upon human life itself; that after all the human soul itself was the most vital and essential kind of manufacture with which a nation could concern itself; and that to this kind of production, when properly regarded, all else must be only subsid-

iary. He saw, moreover, that the foundations of our Society were laid on a basis of conquest and exaggerated inequality, inherited from more barbarous times, with a total disregard of his primary axiom.

He did not arrive at these conclusions without much sorrow and searching of heart. He had been brought up a Tory, and considered himself a Tory to the end; nor was it in anything but pain and grief that he set himself to think out a basal scheme for political economy, truer and sounder than the mere unrestricted competition and cultivated acquisitiveness which hitherto had been treated as the foundation on which an abstract theory of Society could be built.

After publishing his views, and thereby rousing almost universal hostility and opposition, he went abroad to meditate further on the subject; and in March 1863 we find him writing from his retreat at Mornex:—

"The loneliness is very great, and the peace in which I am at present is only as if I had buried myself in a tuft of grass on a battlefield wet with blood—for the cry of the earth about me is in my ears continually, if I do not lay my head to the very ground."

FINK

And, a few months later:—

"I am still very unwell, and tormented between the longing for rest and lovely life, and the sense of this terrific call of human crime for resistance and of human misery for help, though it seems to me as the voice of a river of blood which can but sweep me down in the midst of its black clots, helpless."

The old Economy had treated growing trade and material prosperity as the main object of life; as if output of cotton and coal were an end of existence. The basis of the old theory was, that whereas individuals differed among themselves in every kind of mental and spiritual quality, they all agreed in possessing one fundamental instinct, the instinct of gain or acquisitiveness,—they all united in an enlightened selfishness as the motive power and organizer of life: and it was assumed that this universal quality would serve as the foundation for an abstract science.

Ruskin perceived clearly, what many economists have since developed, that such a narrow basis neglected the larger part of human nature, and reduced the motive power of humanity to its lowest terms. Abstraction in a science is all very well, and some amount of abstraction is necessi-

tated by our limited faculties: we cannot bring the whole universe to bear on any particular problem; but abstraction which cuts away essential features, and deals with a fraction as if it were the whole, is liable grossly to mislead.

All admit it now, and it is difficult for us to imagine a time when such preachings could be regarded as obnoxious and heretical; but the outcry which arose when his essays on the subject appeared under the editorship of his friend Thackeray in the *Cornhill Magazine,* and the suppression of the articles, first in the *Cornhill* and subsequently in *Fraser,* are proof positive of the novelty as well as the unwelcomeness of the higher note.

After three chapters of what is now called "Unto this Last" had appeared in the *Cornhill,* Thackeray wrote to say that they were so unanimously condemned and disliked that, with all apologies, he could only admit one more; so with a fourth chapter, which was made a little longer than the rest, the series was hastily brought to a conclusion, and the author silenced for a time.

The reason of the outcry is not far to seek. So long as his heretical principles were applied only to Art, says a biographer, Society could

afford to be amused; but when they aimed at the working creed, the comfortable scheme of all Society, the sanction of property as then held and constituted, and the justification of life as then lived, Society became indignant. And not only society, but his father, who was only destined to live another year, and "whose eyes had glistened over early poems and prose eloquence," expressed strong disapproval of the heresies now promulgated by his idolized and only son.

The attack, however, on the orthodox principles of political economy was after all really parallel to his previous attack on the old orthodoxy in art; and so it happened that in both phases of his life he was consistently leading a revolt against ancient traditions, and preaching the new and unexpected. But in spite of appearances, and contrary to the impression at the time, he was essentially sane and really moderate throughout. His friend and biographer, Mr. Collingwood, truly says of him: "He did not demand—and this is important to note—he did not demand a state of society hopelessly unlike the present . . . he took human nature as it is, but at its best; not, as the older economists did, at its worst. He tried to show how the best

could be brought out, and what the standards should be towards which education and legislation should direct immediate public attention."

But it must not be supposed that in every detail Ruskin worked out his perceptions to correct conclusions. The outcry and fierce opposition served the purpose of giving him still clearer insight into the actual conditions of the time, and he continued the interrupted series of articles in a more detailed and laborious form now called "Munera Pulveris"; but in the execution of this difficult and specialized work he must be assumed to be liable to correction. In so far as the opposition of experts was due to these doubtful idiosyncrasies, it was partially justified; but unfortunately they did not till some time later admit that the main principles which he laid down were essentially and permanently true.

Mr. Ruskin is always very precise in his use of language; every word employed by him is employed with due thought given to its meaning and history and uttermost significance. Words in common use, like money, price, value, wealth, riches, are all by him carefully discriminated, and used each in its proper and distinctive sense. So one of his theses is that "riches" depend on in-

equality of possessions, and on the possibility of transfer from one who has to one who needs:—

"Men nearly always speak and write as if riches were absolute, and it were possible, by following certain scientific precepts, for everybody to be rich. Whereas riches are a power like that of electricity, acting only through inequalities or negations of itself. The force of the guinea you have in your pocket depends wholly on the default of a guinea in your neighbour's pocket. If he did not want it, it would be of no use to you."

Riches are in fact the power of controlling service and directing transfer of goods; and this leads him to draw a perfectly scientific analogy between riches and electricity. Electricity all at one level or potential has no power whatever, it can do nothing. To get work out of it, it must be allowed to flow from a place of high to a place of low potential. Elevation of some portion confers energy. Depression of another portion equally confers energy. The greater the inequality the greater the riches. Not by any means the greater the wealth: that is a totally different matter. Wealth is that which contributes to the common weal or well-being; it is really weal-th; while the possession of great

riches is, in an extreme case, compatible with severe poverty—not only poverty of soul, but actual material poverty. For one method of making a preposterous Crœsus would be for every one else in the world to be on the brink of starvation. Yet what man could wish to live amid surrounding misery? Is it not proverbial that the menials who minister to the rich are pampered? not for their own sake, but to add to the comfort of the rich person. "Among the blind one-eyed is king"; yes, but who would wish to be monarch of a nation of blind? The kingdom is not worth having; nor is a kingdom of the solitary rich among a nation of depressed poor.

Another thesis maintained by Mr. Ruskin is that honour is given to various employments, in recognition of and in proportion to the spirit of sacrifice which is supposed to enter into them. On this basis it is sometimes held that the merchant's profession cannot be especially honourable, because it is supposed that, although his work may be necessary to the community, the motive of it is wholly personal.

Whereas, on the contrary, the business of the true merchant, and of righteous commerce, is of

the most vital significance to men, and is really of more value than that of the highly honoured professions of the lawyer and the soldier. Rightly regarded, it will be found "that commerce is an occupation which gentlemen will every day see more need to engage in, rather than in the businesses of talking to men, or slaying them; that in true commerce, as in true preaching, or true fighting, it is necessary to admit the idea of occasional voluntary loss; that sixpences have to be lost, as well as lives, under a sense of duty; that the market may have its martyrdoms as well as the pulpit; and trade its heroisms, as well as war."

But the call to honour, on Mr. Ruskin's principles, is a severe one, being the part which belongs to any other devoted and responsible leader of men:—

"And as the captain of a ship is bound to be the last man to leave his ship in case of wreck, and to share his last crust with the sailors in case of famine, so the manufacturer, in any commercial crisis or distress, is bound to take the suffering of it with his men, and even to take more of it for himself than he allows his men to feel; as a father would in a famine, shipwreck, or battle, sacrifice himself for his son."

Lastly, and chiefly, the central doctrine of Mr. Ruskin's writings is this: that as consumption is the end and aim of production, so development or expansion of life is the end and aim of consumption,—the criterion by which the usefulness of production must be judged.

"Consumption absolute is the end, crown, and perfection of production; and wise consumption is a far more difficult art than wise production. Twenty people can gain money for one who can use it; and the vital question, for individual and for nation, is never 'how much they make?' but 'to what purpose do they spend?' "

And in his chapter on the "veins of wealth" he contrasts real and spurious national wealth as follows:—

"In fact, it may be discovered that the true veins of wealth are purple—and not in rock, but in flesh—perhaps even that the final outcome and consummation of all wealth is in the producing as many as possible full-breathed, bright-eyed, and happy-hearted human creatures."

In all our manufactures and commercial activity at present we are blindly seeking, what? It is a question somewhat hard to answer. We seem

to expend energy by instinct rather than by reason, and to be satisfied with much exertion without great regard being paid to the direction in which it is being expended.

Upon all this blind and ant-like activity Mr. Ruskin flashes the light of his analysis, and shows that the true wealth of a nation may depend in the long run upon quite other activities:

"It is open, I repeat, to serious question, which I leave to the reader's pondering, whether, among national manufacturers, that of Souls of a good quality may not at last turn out a quite leadingly lucrative one?"

This idea runs as a guiding thread through the whole of his life and writings: his life message may almost be summed up in some such sentence. He says indeed that his object is "to leave this one great fact clearly stated: THERE IS NO WEALTH BUT LIFE. Life, including all its powers, of love, of joy, and of admiration."

That is the great truth at the root of all his diatribes—a truth which he expressed in a hundred different ways; sometimes by utterances humorously exaggerated in tone, sometimes in words forced from him by painful recognition

of the difference between what is and what so easily might be. The artificial ugliness of portions of England, after visions of Switzerland and Italy, the strange ambition of English leaders to convert their own garden into a manufacturing desert, the clear and strong perception of the truth that, after all, the supply of food and necessities must come out of the land, lead him to speak thus:—

"All England may, if it so chooses, become one manufacturing town; and Englishmen, sacrificing themselves to the good of general humanity, may live diminished lives in the midst of noise, of darkness, and of deadly exhalation. But the world cannot become a factory, nor a mine."

The world cannot support its population by manufactures alone. Wherefore, he rejoices to think, though one country may sacrifice itself, still,

"So long as men live by bread, the far away valleys must laugh as they are covered with the gold of God, and the shouts of His happy multitudes ring round the wine-press and the well."

So Ruskin leaves with us what is virtually a plea for the simple life: all sharing in quiet

pleasures, not competing in a miserable struggle for subsistence, or for extravagant luxury. No outrageous and unattainable ideal does he set before us, far away though it seems from the conditions of to-day. But the scales are already beginning to fall from our eyes; and now one, now another, is perceiving that things as they are are stupid and wrong; that they conduce to the happiness neither of the rich nor of the poor; that violent inequality and unbrotherliness lead to pain and misery among all but the selfish—even among those who "have"; while, among those who "have not," it leads to stunted souls and a degrading search after forgetfulness and oblivion,—so that there is taken away from them even that which they have.

"What is chiefly needed in England at the present day is to show the quantity of pleasure that may be obtained by a consistent, well-administered competence, modest, confessed, and laborious. We need examples of people who, leaving Heaven to decide whether they are to rise in the world, decide for themselves that they will be happy in it, and have resolved to seek—not greater wealth, but simpler pleasure; not higher fortune, but deeper felicity; making the first of possessions, self-possession; and honouring themselves in the harmless pride and calm pursuits of peace."

XX

HUXLEY'S LAY SERMONS[1]

"It has been fortunate for the intellectual interest of life that the peace-loving Darwin and the self-effacing Wallace should have had a coadjutor more vividly touched with earthly fire, like the mortal charger who, champing more fiercely in the battle's fray, kept pace with the two undying steeds of Achilles. But we must remember that Professor Huxley's trenchant polemic has cast a kind of glory about the mere fact of man's ignorance which cannot possibly be kept up for long. Battles there will always be; but never again perhaps such a plunging through half-armed foemen, such an ἀριστεία of the Agnostic as we associate with that brilliant name."—F. W. H. Myers (Essay on "Charles Darwin and Agnosticism.")

Yes, battles there will always be, and Huxley was a splendid fighter, but the ostensible cause for which he fought—insistence on our present ignorance and on the folly of pretending to know what in truth we do not—is not a cause of

[1] An Introduction to a volume in Dent's Library.

satisfying fulness. Ignorance it is right to confess, but it is never a thing to glory in. Only in an age in which rash assertion and mistaken tradition dominated thought too strongly was the flag of the Agnostic a conquering and triumphant emblem. The battle has already shifted to other grounds: and before the end of his life Huxley realized that a great part of his warfare on the negative side was accomplished, and that it remained to restrain his camp-followers from prowling too savagely among the dead and wounded.

The essential and permanent aspect of his teaching, like the teaching of all men of science, lies on the positive side; and here effort is still necessary, for, though a great deal has been accomplished, the scientific training and interest of the average educated man is still lamentably deficient. Nor are the attempts to remedy the deficiency, as carried out in schools and colleges, always of the wisest and happiest kind. Nevertheless an effort is being made; and when things have settled down into their due proportion, future generations will recognize how much they owe to the preachings and teachings, the lay sermons and lectures, of Huxley.

The supremacy of truth, the reality of things, the cultivation of the senses, the need for realistic education and understanding of the physical universe in the midst of which man is set, the folly of yielding to mere glamour, and the sin of sophisticating what we can perceive of truth by hope of reward or dread of consequence—all this he strenuously fought for; and surely we may say that on the whole he won. No recognized branch of natural knowledge is now excluded from contemplation by reasonable men, nor is stringent inquiry cursed or dreaded, even by those to whose general purview it appeared at one time to be alien. The universe is recognized as one, and loyal allegiance must be accorded to every proven fact.

The battle is now transferred from this general contention to a more special one:—What range of facts can we admit into the category of positive knowledge? How much wider can we make the area of rational contemplation? Shall the human race be for ever limited to the domain of ether and atoms alone—as W. K. Clifford imagined—or are there other existences, just as real, just as important, just as well worthy of study, just as deserving of scrutiny by scientific methods?

It was no attack on religion that Huxley led, it was an attack on the *præjudicia* of religion—the bland assumptions which did duty for reasoning, the self-interested arguments which concentrated attention on the past, attempted to despise the present, and held out illusory hopes for the future.

Study the universe before you, the living universe, with its traditions and history incorporated in it; cease to limit yourselves to the fancies and speculations of more ignorant times: that was Huxley's message.

A piece of chalk, he said, rightly interpreted, will tell you more about the physical history of the world than myriads of books. Try and learn the language of the chalk—"it is easier than Latin," so he said; and whoso knows the true history of a bit of chalk in a carpenter's pocket "is likely, if he will think his knowledge out to its ultimate results, to have a truer, and therefore a better, conception of this wonderful universe, and of man's relation to it, than the most learned student who is deep-read in the records of humanity and ignorant of those of nature."

This is language appropriate to intellectual warfare. It is part of his battle-cry, it is an em-

phatic statement of one side of the truth, it is not the whole truth. Its comparative side is its weak side: it is not really necessary to decry other forms of learning in order to exalt one—and Huxley showed later that he did not think so; it was only because one side was being neglected, and the other was in possession of the field, that he stood up manfully for the outcast, and dragged it into a prominent position.

The comparative side of his utterance was pugnacious, and therefore temporary, but the positive side is eternally true. Every bit of chalk *is* related to all the rest of the universe; and he who would know all about it—the life of the creatures whose remains compose it, its past, present, and future in all its phases—must have a grasp of the universe beyond the present scope of man. Tennyson said the same thing, more poetically, in his "Flower in the crannied wall."

But granting all this, what then? Because we are not to jump at conclusions too rapidly, because we must make our bearings and foundations sure, because our hopes and predictions must be well founded—is there to be no future, no hope, for the human race? Is the end of all human struggle and effort to coincide with the

probable end of the solar system—a dark, dead, lifeless lump careering through the depths of space? It were to reason too curiously to reason so.

Darwin could not contemplate such an ending —his instinct rebelled against it. In a notable passage he expresses the placid disbelief of an open-eyed investigator in such a conclusion—an investigator to whom the avenues of knowledge were in this direction closed, and who therefore would make no assertion one way or the other, but who instinctively felt that there must be some other answer. This he says:—

"Believing as I do that man in the distant future will be a far more perfect creature than he now is, it is an intolerable thought that he and all other sentient beings are doomed to complete annihilation after such long-continued slow progress."

And Tennyson, in his poem "Despair," has dramatically and impersonally voiced a violent development of the same feeling:—

"Why should we bear with an hour of torture, a moment of pain,
If every man die for ever, if all his griefs are in vain,
And the homeless planet at length will be wheel'd through the silence of space,
Motherless evermore of an ever-vanishing race,

When the worm shall have writhed its last, and its last brother-worm will have fled
From the dead fossil skull that is left in the rocks of an earth that is dead?"

And again in "Vastness"—

"What is it all, if we all of us end but in being our own corpse-coffins at last,
Swallow'd in vastness, lost in silence, drown'd in the deeps of a meaningless past?"

But in the fighting age such instincts and feelings and longings had rigorously to be suppressed. They were too perilously near the old bulwarks of superstition, which were to be broken down. Hence the side of assured positive knowledge was to be kept in the van—there was indeed plenty to do,—and a more comprehensive understanding of the puzzles of existence might wait until some positive knowledge began to appear, throwing the light of day upon them also.

While things remain in the dark they must be ignored. This is the fortress of the Agnostic position. Flashes of sheer speculation sometimes burst from it, and the hope was not lacking that "out of the molecular forces in a mutton chop Hamlet or Faust could be deduced by the physics of the future." But this enthusiastic and more than half playful utterance of Tyndall (*Life and Letters of Huxley*, i. 231) is showing itself base-

less—as baseless and as alien to the truly agnostic position as any of the superstitions that were then being attacked. Nevertheless, it is an interesting sign of the enthusiasm kindled by the physical discoveries of the nineteenth century—interesting and quite intelligible, and in its way legitimate; for readers of the present day should learn where to emphasize, and where to discount, the utterances of the teachers of an enthusiastic and a fighting age.

Here, for instance, is the conclusion that Huxley draws from his piece of chalk, which, like lime exposed to the oxy-hydrogen flame, had become luminous under his scrutiny, so that "its clear rays, penetrating the abyss of the remote past, have brought within our ken some stages of the evolution of the earth. And in the shifting 'without haste but without rest' of the land and sea as in the endless variation of the forms assumed by living beings, we have observed nothing but the natural product of the forces originally possessed by the substance of the universe."

Yes, that is a narrowly logical position. Keep rigidly to scrutiny of the material universe, and nothing beyond matter and force shall you discover. The conclusions that you draw will be

entirely appropriate to the data. Things belonging to Cæsar will be rendered unto Cæsar. Of things not so belonging it need not yet be the time to discourse.

It would be a great mistake to assume that in all his contentions Huxley was right: we can imagine his sarcasm at the notion of infallibility in connection with his utterances. In a few cases he went, in my judgment, seriously wrong; led astray by controversial successes, he occasionally inflicted undeserved blows upon causes which had much of good in them, and which might have flourished with his help,—upon such a cause as the early efforts at social work of the Salvation Army, for instance. And, by his concentrated insistence on the material side of things, he sometimes led his hearers to imagine that it was the only side that mattered, or even the only one that existed. Nevertheless, it was not really against religion that Huxley was wielding his battle-axe! it was against the Fetishism, the Polytheism, the theism or atheism, and many other isms, with the relative merits and demerits of which, as he said, he had nothing to do:—"But this it is needful for my purpose to say, that if the religion of the present differs from that of the past, it is

because the theology of the present has become more scientific than that of the past; because it has not only renounced idols of wood and idols of stone, but begins to see the necessity of breaking in pieces the idols built up of books and traditions and fine-spun ecclesiastical cobwebs: and of cherishing the noblest and most human of man's emotions, by worship 'for the most part of the silent sort' at the altar of the unknown and unknowable."

Here, again, we encounter a glorification of the unknown god, which, as was implied before, cannot for ever, nor for long, be an object of rational worship. The intellectual business of the human race, and of scientific investigators, is to attack the unknown, and to make it, so far as possible, gradually known. Never completely known, nor at all adequately known, but never unknowable. Infinite things cannot be grasped by finite comprehension—in that sense unknowable, yes, but in no other. The universe itself is unknowable, in the sense of being infinite; but the human aspect of it is open to our examination and comprehension—with that we have kinship and instinctive affinities—and it would only confuse the issue, and muddy the stream of scientific exploration, if we

were to start on our quest with the idea that anything whatever was in any real and practical sense "unknowable."

To be able to ask a question is the first step towards getting an answer. There must be myriads of things in the universe about which it has never occurred to a human being to formulate any sort of idea. Those truly are outside our present ken; but anything of which we can discourse and think—that is on the way, by patience and perseverance and rigorous care and truthfulness, to become known.

The discourse of Huxley's on "A Liberal Education," which he gave to working men, is worthy of close attention, especially among the higher artisans who are determining to get for themselves, if so they can, and for their children still more, the advantages of some approach to a liberal education.

It is not the whole truth which he there expresses, it is one aspect of the truth—an aspect that then needed emphasis more than it does now. It is the view of an individual man, but of a profoundly wise and cultivated man, who would never wish us to limit our grasp of truth to an

understanding of his own utterance, but would ask us to listen and progress further. What he is anxious about is that we shall not lag behind.

The metaphor of a game of chess is employed by Huxley as a parable of life:—

"The chess-board is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of nature. The player on the other side is hidden from us. We know that his play is always fair, just, and patient. . . . My metaphor will remind some of you of the famous picture in which Retzsch has depicted Satan playing at chess with man for his soul. Substitute for the mocking fiend in that picture a calm, strong angel, who is playing 'for love,' as we say, and would rather lose than win, and I should accept it as an image of human life."

A little further on comes a passage, often quoted, about the strict discipline of physical nature:—

"Ignorance is visited as sharply as wilful disobedience—incapacity meets with the same punishment as crime. Nature's discipline is not even a word and a blow, and the blow first; but the blow without the word. It is left to you to find out why your ears were boxed."

And presently comes that magnificent sentence about control of the passions, which I quote in order to draw to it special attention.

"That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that as a mechanism it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order; ready, like a steam-engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of nature or of art, to hate all vileness, and to respect others as himself.

"Such an one and no other, I conceive, has had a liberal education."

The petty Agnostics who, invoking the shade of Huxley, look out of their little holes and corners, peer through a foggy atmosphere, and deny the stars, have no support from their great precursor. He would counsel them to see life

steadily and see it whole, and to remember that the greatest men are not those who blink difficulties and claim that they have done more than they have, but those who modestly admit every difficulty, and where they are ignorant conspicuously avow it.

To those, for instance, who imagine that Darwin discovered the whole truth about the origin of species, by his undoubtedly just emphasis on struggle for existence and survival of the fittest—since these influences tend to clinch and make permanent the variations which otherwise arise, —to those who imagine that we understand fully the origin of those variations, without which natural selection would have nothing to work upon, let us quote the following from Darwin himself:—

"Our ignorance of the laws of variation is profound. Not in one case out of a hundred can we pretend to assign any reason why this or that part varies more or less from the same part in the parents."

Lastly, in these days when women have come so much to the front, and are showing signs of occasionally even over-complete emancipation, it is well to remember that only half a century ago

the cause of their rational and higher education had to be fought. Huxley's article on "Emancipation—Black and White," an outcome of the American Civil War, is a plea for giving a fair field and no favour.

"Emancipate girls," he says. "Let them, if they so please, become merchants, barristers, politicians. . . .

"Women will be found to be fearfully weighted in the race of life. . . .

"The duty of man is to see that not a grain is piled upon that load beyond what nature imposes; that injustice is not added to inequality."

So, then, we come to the more technically scientific lectures, the biological teaching of which he was a master. He discusses, among other things, the probable origin of the human race—whether it spread from one centre or from many—and evidently inclines to the view that human evolution took place at only one point of the earth's surface, and was distributed over it by migration. But on this he does not dogmatize: the alternative views have difficulties of their own. The nascent stages of humanity must have been delicate and dangerous in the extreme, and it seems unlikely that the process of evolving man

would be often repeated at different places on a planet. But then it is difficult to contemplate any form of uncivilized migration which from a centre in, say, Asia could reach and populate the American continent down to Patagonia.

"The whole tendency of modern science is to thrust the origination of things further and further into the background; and the chief philosophical objection to Adam [is], not his oneness, but the hypothesis of his special creation."

A prominent part of his teaching at this time consisted of a course of lectures on the skull and its development. The various stages of the human skull, and of the animal skull, are dealt with, and their points of similarity and difference emphasized. To any one who doubts the physical ancestry of man, as part of the animal world, these chapters will bear the meaning which they are intended to convey.

But if any one at this time of day thinks that physical ancestry is the last word, and exhausts the meaning of human genesis and of what may be meant by "Adam,"—any one who thinks that spirit and genius and inspiration offer no field for investigation, furnish no clue to interpretation, and are foreign to any rational study of the

human race, the possibilities of which are exhausted by an exemplary scrutiny of dry bones—such an one would wrest the teachings of the learned among mankind and apply them to his own stultification. It is not by denying and restricting that we progress, it is by examining the ground and advancing, without haste, without rest, till we reach fresh woods and pastures new. Admitting those things which are behind, and reaching forward to those things that are before —that is the attitude of the genuine explorer of nature, for all time.

The truth of one set of things is quite compatible with the truth of many another set of things. Only let the truth in every age be established, and let no corner of the universe—physical, mental, moral, spiritual—be closed to patient and reverent investigation.

To those few unfaithful pastors who dare not admit the plain teachings of modern science, and to those many pathetic half-educated strivers after knowledge who think it their duty to deny everything else, I say:—

Oh, race of men, be worthy of thy heroes. Recollect that bones and lowly ancestors alone are far from exhausting the truth of the universe;

learn the lessons these things can teach, and bethink yourself also of the triumphs of mind over matter; realize the dominion of music and poetry and science and art; and remember, when tempted to take a low and depressed view of humanity, that during our own days we have had living with us on this small island a Darwin, a Tennyson, and a Huxley.

XXI

THE ATTITUDE OF TENNYSON TOWARDS SCIENCE[1]

HENRY SIDGWICK wrote in 1860 concerning Tennyson that he "regarded him as pre-eminently the poet of science"; and to explain his meaning he contrasts the attitude of Wordsworth, to nature, with that of Tennyson:

"The nature for which Wordsworth stirred our feelings was nature as known by simple observation and interpreted by religious and sympathetic intuition."

—an attitude which left science unregarded. But, for Tennyson,

"the physical world is always the world as known to us through physical science; the scientific view of it dominates his thought about it, and his general acceptance of this view is real and sincere, even when he utters the intensest feeling of its inadequacy to satisfy our deepest needs."

[1] An article contributed at the request of Lord Tennyson to a volume called *Tennyson and his Friends*, published in 1911.

It is probable that what was then written is now a commonplace of letters, and requires no insistence, but as a professed student of science, whose life has extended over the greater part of the time which has elapsed since "In Memoriam" was published, I welcome the opportunity of adding my testimony in continued support of the estimate made by Professor Sidgwick half a century ago.

It is generally admitted, and has been recently emphasized, that wherever reference is made to facts of nature, in the poems, or the fringe of science touched on,—as it so often is,—the reference is satisfying and the touch precise. Observers of nature have often called attention to the beautiful accuracy with which natural phenomena are described, with every mark of first-hand personal experience, as distinct from merely remembered conventional modes of expression. And the same sort of feeling is aroused in the mind of a student of science as he comes across one after another of the subjects which have kindled discussion during the Victorian epoch; he is inevitably struck with the clear comprehension of the fundamental aspects of the themes treated

which the poems display, he sees that the poet is never led into misrepresentation or sacrifice of precision in the quest for beauty of form. The two are wedded together "Like perfect music unto noble words."

To quote examples might only be tedious, and would assuredly be misleading. It is not that the bare facts of science are recorded,—such record could not constitute poetry—certainly not high poetry,—it is not merely his acquaintance with contemporary scientific discovery, natural to a man who numbered leading men of science among his friends;—it is not any of this that arouses our feeling of admiring fellowship, but it is that with all his lordship of language and power of expression so immensely superior to our own, he yet moves in the atmosphere of science not as an alien but as an understanding and sympathetic friend.

Look back upon the epoch in which he lived—what a materialistic welter it seems! The mind of man was going through a period of storm; antiquated beliefs were being jettisoned, and everything spiritual seemed to be going by the board; the point of view of mankind was rapidly

changing, and the whole of existence appeared capable of reducing itself to refined and intricate mechanism.

Poets generally must have felt it as a terrible time. What refuge existed for a poet, save to isolate himself from the turmoil, shut himself into his cabin, and think of other times and other surroundings, away from the uproar and the gale. Those who did not thus shelter themselves were liable to bewail the time because the days were evil; as Arnold did, and Clough. But thus did not Tennyson. Out through the tempest he strode, open-eyed and bare-headed, with figure erect, glorying in the conflict of the elements, and summoning the men of his generation to reverence and worship.

Doubt, yes doubt he justified—doubt, so it were straightforward and honest. Forms and accessories—these he was willing to let go, though always with respect and care for the weaker brothers and sisters to whom they stood for things of value; but faith beyond those forms he clung to, faith fearless and triumphant, uprising out of temporary moods of despondency into ever securer conviction of righteous guidance through-

out creation and far-seeing divine purpose at the heart of things.

Other men retained their faith too, but many only attained security by resolutely closing their eyes and bolting the doors of their water-tight compartments. But the glory of Tennyson's faith was that it never led him to be unfaithful to the kinds of truth that were being revealed to his age. That, too, was an age of revelation, and he knew it; the science of his epoch was true knowledge, as far as it went; it was over-emphatic and explosive, and to weaker or less inspired minds was full of danger, but it was genuine cargo, nevertheless, which must be taken on board; there was a real overload of superstition which had to be discarded; and it was his mission, and that of a few other noble souls, to help us to accomplish with calmness and something like wisdom the task of that revolutionary age.

In the conflict between science and faith our business was to accept the one without rejecting the other: and that he achieved. Never did his acceptance of the animal ancestry of man, for instance, upset his belief in the essential divinity

of the human soul, its immortality, its supremacy, its eternal destiny. Never did his recognition of the materialistic aspect of nature cloud his perception of its spiritual aspect as supplementing and completing and dominating the mechanism. His was a voice from other centuries, as it were, sounding through the nineteenth; and by his strong majestic attitude he saved the faith of thousands who else would have been overwhelmed; and his writings convey to our own age a magnificent expression of that which we too have still not fully accepted, but which we are on the way to believe.

If asked to quote in support of this statement I will not quote more than the titles of some of the chief poems to which I appeal. Not always the greatest poems perhaps do I here refer to, but those which most clearly uphold the claim of the poet's special service to humanity during the period of revolution in thought through which mankind has been passing.

Let me instance, therefore, first and most obviously, "In Memoriam"; and thereafter poems such as "De Profundis," "The Two Voices," "The Ancient Sage," "Ulysses," "Vastness," "By an Evolutionist," "Demeter and Perse-

phone," "Akbar's Dream," "God and the Universe," "Flower in the Crannied Wall," "The Higher Pantheism," "The Voice and the Peak," "Wages," and "Morte d'Arthur."

If I do not add to this list the great poem "To Virgil," who in his day likewise assimilated knowledge of diverse kinds and in the light of spiritual vision glorified all he touched, it is only because the atmosphere of the ancient poet is so like that of the modern one that it is not by any single poem that their sympathy and kinship has to be displayed, but rather by the similarity of their whole attitude to the universe.

By the term "poet of science" I understand one who assimilates the known truths of science and philosophy, through the pores, so to speak, without effort and with intuitive accuracy,—who bears them lightly and raises them above the region of bare fact into the real of poetry. Such a poet is one who transfuses fact with beauty, he is ready to accept the discoveries of his age, no matter how prosaic and lamentable they seem, and is able to perceive and display the essential beauty and divinity which runs through them all and threads them all together. That is the service which a great poet can perform for science in

his day and generation. The qualities beyond this—exhibited for the most part perhaps in other poems—which enable him to live for all time, are qualities above any that I have the right or the power to estimate.

To be overwhelmed and mastered by the material and the mechanical, even to the extent of being blind to the existence of every other aspect, is common and human enough. But to recognise to the full the reign of law in nature, the sequence of cause and effect, the strength of the chain-armour of necessity which men of science weave, and yet to discern in it the living garment of God—that is poetic and divine.

INDEX

Abstraction in science, 300
Achilles and tortoise, 9, 11
Action and reaction, 7
Adam, 326
Adam Bede, 89
Adaptation of environment, 205
Adriatic, port on, 103
Advertisements, 282, 283, 289
Æneid, sixth book, 112
Afforestation, 178
Agnosticism, 311, 312, 317, 319
Agnostics, 323
Agriculture, 211, 225, 251, 294, 309
Aim, and direction, of transfer, 135
  and timing, 42, 43
  of existence, 224, 225
Alabama claims, 101
Alexander, Professor, 6
Alps, 156
Alternations of phase, 37, 42
Alton Locke, 89
Anabasis, 52
Ancestry of man, 326
"Ancient Sage," 334
Anæmic virtue, 86
Animals and plants, 34
Anticipation of future, 46
Apprehension of motion, 14
Arbitration treaty, 101
Architect and builder, 63
Areopagitica, 86
Aristotelian Society, 6
Arithmetical contingency, 30
  paradox, 30
Armada, 148
Armenia and Crete and Turkey, 139
Armenian and Cretan, 140
Army, citizen, 200
Arnold, 332
Art, and life, 158
  and science and peace, 108
  and society, 158
  Political economy of, 298
  works of, 36, 49, 82, 84, 85, 214
Artificer, 52, 54
Assistance and supervision, 51, 57
Athens, 146, 196
Atlantic liner, 60
Austrian Empire, 103
Automatic stoking, 277
Axioms, geometrical, 28
  and postulates, 26

Bach and organist, 44
Bacteriological problems, 252
Balfour, A. J., 26, 96
Barrier of language, 115
Bee, working, 54
Benefit societies, 175
Ben Jonson, 48
Bergson's philosophy, 28, 31, 32, 33, 45, 46, 51
Berkeley, 69
Bernard Shaw, 92
Bicycle and treadmill, 290
Bigotry and dogmatism, 58, 61, 63, 72
Biology, chemistry, physics, and philosophy, 39
Black Sea and Russia, 104
Blasphemy, 92, 208
Blatchford, Robert, 285
"Blessed Damosel," 209
Boards in meadows, 282
Boundary, 2
  of British Columbia, 102
Boiler furnaces, 278, 279

Boilers, firing of, 275
inefficiency of, 275
Bradley, A. C., 148
Brain and nervous system, 41, 45
and will, 44
Brewing at universities, 260
British Columbia, boundary of, 102
Brotherhood and co-operation, 204
Builder and architect, 63
Bullets, transfer of, 135
Burne Jones, 209, 210
Bushido, 188

Capital, 135, 137, 182
Care and culture, 205, 206
Cart and horse, 7
Catastrophes in war, 115
Cathedral, St. Paul, 63
Caxton's press, 155
Censorship of drama, 88
Chain-armour of necessity, 336
Chalk, a piece of, 314, 318
Change and sequence, 19
Characters of Shakespeare, 23
Charity, 173
organization, 233, 238
private, 236
public, 218, 230, 233
Cheapness, 174
of high salaries, 185
Chemistry, biology, physics, and philosophy, 39
Chess, 50, 93, 322
Choice and self-determination, 35, 46
Christianity, 175, 179, 189, 227
and prudence, 166
Christopher Wren, 63
Citizen army, 200
education of, 196
City aid, 241
ideal, 209
refuse, 220
Civil War, 98
Civilisation, 198, 255
Claims, Alabama, 101
Clark, Sir Andrew, 292
Cleansing fire, 72
Clifford, W. K., 29, 313
Clock, fundamental, 17
and motion, 18
Clough, 91, 332
Coal, combustion of, 268, 271
export tax, 244
house, 270
sale of, 211, 244, 285
smoke, 265
Coast erosion, 220
Coercion, 197
Coin, transfer of, 143, 151, 303
Collingwood, 302
Combustion of coal, 268, 271
incomplete, 274
problems, 267
Commerce, honour in, 306
Commercial England, 167
millennium, 168
Companies, Limited Liability, 129
Competition, 299
and co-operation, 281, 288, 295
and emulation, 287
Compulsion, 83
and guidance, 196
Concert of Europe, 140, 142
Coniston and smoke, 167
Conscientious brutality, 230
Conscious evolution, 205
Consciousness and matter, 34, 35
Consumption and production, 307
Contingency, 50
arithmetical, 31
in geometry, 29
Continuity and discontinuity, 10
Conventions of society, 93
Co-operation and brotherhood, 204
Co-operation and competition, 281, 287, 295
in family, 125
in science, 118
international, 109, 117
Corn, duty on, 244
Cornhill Magazine, 301

Corporate expenditure, 172, 175, 249
land, 179
wealth, 172, 180
Cosmic process, 206
sciences, 110
Country and town, 179, 202, 207, 210, 309
Coupon cutting, 124
Creation, 23, 82, 326
Creations of genius, 25
Cretan and Armenian, 140
Crete and Armenia and Turkey, 138
Crimea, 105
and Turkey, 200
Criminals, 251
and paupers, 216
treatment of, 221
Crœsus, 305
Cromwell and Milton, 99
Crusades, 138
Culture and care, 204, 206
Cyprus, 141
Malta, Gibraltar, 105

Dangers of investigators, 118
Dante and Michael Angelo, 156
Darwin, 164, 316, 324, 328
and immortality, 317
and Wallace and Huxley, 311
Davy, Humphry, 35
Day, length of, 14
Debt, public, 181
Defence, 200
of philosophic doubt, 26
Degeneration, 50
Degradation of energy, 36
Deity, 25, 39, 57, 335
Democracy, errors of, 214
Derelict land, 220
Descartes, 66
Deserving, 236
Design, 52, 56, 63
Despair, 316
Determinism and causation, 2
and free will, 3
Devolution, 227
Directing of energy, 44
Discipline, nation's, 322
Discontinuity and continuity, 10
and number, 10
Discoveries, value of, 193
Disfigurement, landscape, 283
Distribution of gas, 269
Dividends, 137
Dogmatic materialism, 65
Dogmatism and bigotry, 58, 62, 63, 72
Domestic grates, 274
Dominating intelligences, 22
Drama, censorship of, 88
Drink, and gambling, 119
problem, 256
retailing of, 259, 261
Dullness of existence, 240, 258
Duration and progress, 37

Each for all, 175
Earning and spending, 173
Economy, national, 183
Education Bill, 247
and Huxley, 321
and wealth, 170
of citizen, 196
value of, 157, 159, 162, 166, 247, 252
Effort and force, 48
and joy, 49, 84
national, 111, 113
Egypt and the French, 103
Eight Hours Bill, 291
Electricity analogue, 304
Electrification of air, 254, 266
Elizabethan age, 147
Emancipation, 324
Emperors, European, 142
Empire extending, 138
Emulation, 263
and competition, 287
international, 109, 112, 117
Energy, directing of, 44
guidance of, 40, 42, 44
Engines of war, 97
Entente, 199
Environment, 237
adaptation of, 205
and humanity, 203
Equality of payment, 186
Ether and gravitation, 42
Ethical progress, 206

Eugenics, 77, 204
Europe, concert of, 140, 142
European Emperors, 142
War, 106
Evolution, 38, 56
and Ethics, 206
and progress, 20, 82
and time, 23, 36
conscious, 204
Evolutionary progress, 51
Exchange, 124
Existence, higher, 25
opportunity of, 119
Expenditure, corporate, 172, 174, 249
organized, 249
private, 172
public, 182, 247
Experiment, municipal, 220
Experiments, social, 228
Experts, social, 192, 218
Export coal tax, 244
Eye of needle, 131

Faith, 31
and forms, 332
and science, 327, 333, 335
Family, co-operation in, 125
Federation, 228
imperial, 80
Fermentation industries, 260
Fertility of soil, 252, 294
Fetishism, 319
Fighting by machinery, 113
Finalism, 55
and mechanism, 55
Finance and peace, 141
and press, 142
and war, 140
Financial interests, 138
Fire, cleansing, 72
Fires, gas, 272, 273
smoky, 271, 273
Firing of boilers, 275
Fisheries, Newfoundland, 101
Flames, smoky, 278
Flower in crannied wall, 315, 335
Fog and fume, 266
and rain, 254
town, 266, 267
Forbidden fruit, 86
Force and effort, 49
motion, and speed, 25
or resistance, 16
Foreign policy, 198, 199
Foreknowledge and free will, 20, 57
Fortune, heir of, 132
Fortunes, 123, 129, 143, 184, 239
Foundations of belief, 27
Fourth dimension, 19, 20
Franchise, property, 78
Freedom, 85
and foreknowledge, 57
and intelligence, 54
and mechanism, 35, 36, 83
and necessity, 33
and repression, 94
and responsibility, 78, 82, 94
of action, 2
of animals, 54
of press, 94
perfect, 4
Free will and determinism, 3
and foreknowledge, 20
and mechanism, 196
French and Egypt, 103
Friendliness, international, 118
Friendly societies, 175
Fuel, gaseous, 269, 271, 279
Fume and fog, 266
Funds, public, 181
Furnaces, 276
boiler, 278, 279
Future, anticipation of, 46
conditioned by past, 20, 21
of humanity, 327
of race, 315
past, and present, 19, 20
plans for, 12, 22, 37, 46, 49, 50, 56
preparation of, 22

Galileo, 61
Gambling and drink, 119
Gaols and workhouses, 225
Garden, treatment of, 207
Gardner, Professor Percy, 191, 193

Gas, distribution of, 269
fires, 272, 273
mantle, 279
Mond, 269
water, 269
Gaseous fuel, 264, 270, 279
Gauss and Riemann, 30
Genius, creations of, 25
and intuition, 53, 54
and work, 164
power of, 178
value of, 214
Geometers, great, 29
Geometrical axioms, 28
Geometry, contingency in, 29
German beer, 260
navy, 104
policy, 104
Germany and Mediterranean, 105
Getting on, 145
Gibraltar, Malta, Cyprus, 105
Globe Theatre, 164
Gold, discovery of, 122
value of, 121
Golf, 48
Gordon, 130
Grapes and hops, 257
Grates, domestic, 274
Gravitation and ether, 42
and Newton, 42, 65
Great men, production of, 111
Greek philosophy, 146
Grey, Sir Edward, 96
Growth and change, 24
of money, 135
Guidance and compulsion, 196
and life, 43
and management, 60
of energy, 40, 42, 44
Gun and sportsman, 44

Happiness, value of, 193
Harvesting of truth, 72
Heating by radiation, 278
Heir to a fortune, 132
Helium, value of, 112
Helmholtz and Kelvin, 111
High salaries, cheapness of, 185
Higher existence, 25
History, verdict of, 100
Home Rule for Ireland, 102
Honour in commerce, 306
Hops and grapes, 257
Horse and cart, 7
Hospital aid, 125, 126
House coal, 270
stoves, 276
Housing problem, 254
Humanity, and discipline, 223
and environment, 203
future of, 327
origin of, 325, 326
Hume and Huxley, 70, 71
Huxley, 58, 67, 69, 72, 192, 206, 312, 315, 317, 323, 328
and Darwin, and Wallace, 311
and education, 321
and Hume, 70, 71
and religion, 314
Hydrostatic paradox, 8
Hypatia, 89

Idea of motion, 6
Ideal city, 209
Ideals, 189, 206
of youth, 198, 202
Identity, personal, 70
Idleness and punishment, 224
and work, 240
Illingworth, Rev. J. R., 188
Immortality, and Darwin, 316
of poetry, 23
of works of art, 25
Imperial federation, 80
Incomplete combustion, 274
Increment, unearned, 133
India, and Russia, and Japan, 105
Indirect methods, 246
Industrial efficiency, 243
Inefficiency of boilers, 275
Inequalities, 239, 304, 310
Inequality of payment, 186
Inertia of matter, 48
of prejudice, 75
Infallibility, 28, 31
Inherit the earth, 139

Inheritance, 136, 184, 214
of characters, 202
of property, 132, 133, 143, 213
In Memoriam, 330, 334
Inscription on sovereign, 122
Insect pests, 252
Instability, molecular, 44
of protoplasm, 44
Instinct and intuition, 53
Institutes, social, 210
Intelligences, dominating, 23
Intercourse, international, 115
International co-operation, 109, 116
emulation, 109, 112, 117
friendliness, 118
intercourse, 116
medals, 116
rivalry, 109
solidarity, 117, 118
Intuition and genius, 53, 54
and instinct, 53
Investigators, dangers of, 118
Investments, 129
Ireland, Home Rule for, 102
Italian Tyrol, 104

James, Professor William, 9, 31, 33
Jane Eyre, 89
Japan, 188, 189
and Russia and India, 105
Joint Stock Companies, 129
Joy and Effort, 49, 84
for ever, 298
of life, 147

Kelmscott press, 153
Kelvin, 194
and Helmholtz, 111
Kepler, 130
Killing in war, 113, 115
Kingsley, Charles, 89, 90, 192
Kipling, 237

Labour, savings of, 123
Laissez fàire, 205, 226
Land, corporate, 179
ownership, 179, 211, 212, 285
reclamation, 220, 294
sale of, 211
Landscape disfigurement, 283
Language a barrier, 116
Lavoisier, 214
Law and order, 3
Leisure and work, 213
Licensed victuallers, 261
Licensing Bill, 256, 263
Life, aim of, 309
and art, 158
and guidance, 43
and matter, 34, 36, 40, 41, 47, 52, 55
and wealth, 308
dullness of, 258
joy of, 147
simple, 309, 310
value of, 170
Limited Liability Companies, 129
Literature, national, 110
and science, 110
Liverpool, 145, 153, 281
Loom, 22, 23
Love, 77
Loyalty and truth, 313
Lux Mundi, 188

Machinery, fighting by, 113
Maine, State of, 101
Malta, Gibraltar, Cyprus, 105
Man, ancestry of, 326
and environment, 203
Managers, remuneration of, 185
Manufacture of men, 223, 307, 308
Markets, demand for, 167
Material security, 201
Materialism, 318, 331, 335
dogmatic, 65
Materialistic monism, 41, 59, 60, 63, 315, 317
philosophy, 67
Matter and consciousness, 33, 35, 50
and life, 34, 36, 40, 41, 47, 52, 56
and mind, 41
inertia of, 48
space, and time, 13, 16, 19, 25
Mazzini, 130

Mechanism and finalism, 55
and freedom, 35, 36, 83
and free will, 196
Medals, international, 117
Medicine, tropical, 253
Mediterranean, 103
and Germany, 105
and North Sea, 104
quarrel, 105
Mendicancy, 237
Merchants, 306
Merry England, 147, 165, 284
Mexico, 102
Michael Angelo and Dante, 156
Microtome, 19
Migration, 326
Milestone, on Dover Road, 19
Mill, John Stuart, 78
Millennium, 77, 209
commercial, 168
Millionaires, 128, 130, 134
Milton, 86, 88, 130
and Cromwell, 99
and Shakespeare, 148
Mind and matter, 40
Molecular instability, 44
Mond gas, 269
Money, growth of, 135
and politics, 138
and riches, 120
and value, 161
and war, 139
storage of, 128, 142
transfer of, 134
wealth and riches, 148, 150, 303
Monism, materialistic, 41, 59, 60, 64, 316, 317
Monotonous toil, 118
Monotony, 118
Morris, 127, 215
Tennyson and Ruskin, 156
"Morte d'Arthur," 335
Moth and rust, 128
Motherhood, 76
Mother love, 51
Motion and clock, 18
and number, 14
idea of, 6, 133
paradox, 7, 9, 12
Motion—*continued.*
reality of, 17
speed, and force, 25
third law of, 8
Muirhead, Professor J. H., 6, 232
Munera pulveris, 303
Municipal enterprise, 227
experiment, 220
service, 245
Murieston experiment, 220
Mutual help, 125
Myers, F. W. H., 311

Napoleon, Louis, 200
National army, 200
economy, 183
effort, 111, 113
Health League, 251
literature, 110
poverty, 183, 246, 248, 252, 255
Nation's discipline, 322
Navy, 99, 139, 141
German, 103
Necessity and freedom, 32
Needle, eye of, 131
Newfoundland fisheries, 101
Newton, 66
and gravitation, 42, 65
and Shakespeare, 164
Newton's *Principia*, 66
third law, 8
Noblemen, 131
North Sea and Mediterranean, 103
Number and discontinuity, 10
and motion, 14
Nurses and surgeons, 115

Oblateness of planet, 15
Ointment, 208, 231
Omar Khayyam, 22
One and one, 30
Opportunity of existence, 119
for service, 131
Optimism, 84
Organist and Bach, 45
Organisation, charity, 233, 238
in war, 113

Organised expenditure, 249
Organising victory, 114
Origin of human race, 325, 326
Origins, 35, 38
Ownership, 128, 129, 154, 160
  of land, 178, 211, 212, 285
  of wealth, 143

Pain, 97
  and sorrow, 82, 84
Panama Canal, 102
Paradox, arithmetical, 31
  hydrostatic, 8
  motion, 7, 9, 12
Paradoxes, 7
Passions, 323
Pasteur, 253
Past, future conditioned by, 20, 21
  present, and future, 19, 20
Path to quarrel, 112
Patriotism, 112, 119, 148, 188
Paupers, 217, 234
  and criminals, 216
Payment, inequality of, 186
Peace, 96, 139, 200, 204
  and finance, 141
  and science and art, 108
Perfect freedom, 4
Personal identity, 70
Phase, alternations of, 37, 42
Philanthropy, 126
Philippines, 102
Philosophic Doubt, 26
Philosophy of Bergson, 28, 31, 32, 33, 46, 55
  and science, 62
  biology, chemistry, and physics, 39
  materialistic, 67
Physics, biology, chemistry, and philosophy, 39
Pittsburg, 273
Plans for future, 13, 22, 37, 46, 49, 50, 56
Plants and animals, 34
Poet of science, 335
Poetry, immortality of, 23
Poets and storm, 332
Pointsman and train, 44
Policy, foreign, 199
  German, 103
Political economy of art, 298
  economy, Ruskin's, 303
Politics and money, 138
Poor law, 217, 218, 219, 229, 234, 235
Poor-law commission, 232
Poor rate, 182, 219, 230, 234
Port on Adriatic, 103
Possession, self, 310
Postage, 283
Posters, 282
Postulates and axioms, 27
Poverty, 208, 230, 231, 236
  and riches, 239
  national, 183, 246, 248, 252, 255
  weakness of, 178
Power of purse, 114
Practical man, aims of, 169
Practice and theory, 195
Pragmatism, 24, 31
Prayer, 23
Predestination, 81
Predetermination, 19
Prejudice, inertia of, 75
Present, past, and future, 19, 20
Press, Caxton's, 155
  and finance, 143
  freedom of, 94
  Kelmscott, 153
Prestige, 201
Principia, Newton's, 66
Prison reform, 222, 225
Private charity, 235
  expenditure, 172
  munificence, 251, 253
Problem, drink, 256
Production and consumption, 307
  of wealth, 146, 147
Progress and duration, 37
  and evolution, 20, 82
  ethical, 206
Property, franchise, 78
  inheritance of, 132, 133, 143, 213
Protoplasm, instability of, 43
Provinces, senates of, 79, 227
Prudence and Christianity, 166

Public charity, 217, 230, 233
debt, 180
expenditure, 182, 247
funds, 181
houses, 259
service, 79, 131, 187, 248
spirit, 188
Punishment and idleness, 224
and reform, 216, 221
Puppets, 81
Purse, power of, 114

Qualities evoked by war, 112
Quarrel, path to, 112
Queen Victoria, 78

Radamanth, 92
Radiation heating, 275
Radium, 44
Rain and fog, 254
Rate, poor, 167, 219, 230, 234
Rates, 181
value of, 182
Reactionary movements, 75
Reclamation of land, 220, 294
Reform, 215
and punishment, 217, 221
conditions for, 191, 195, 196
of prisons, 222, 225
of schools, 197
social, 295
Registration duty on corn, 244
Reign of law, 335
Religion and Huxley, 314
and Tennyson, 333
Remuneration of managers, 186
Repression and freedom, 95
Resistance or force, 16
Responsibility, 84
and freedom, 77, 82, 93
Retailing of drink, 258, 261
Retzsch, 322
Rhythmical processes, 43
Riches, 304
and poverty, 239
and power of transfer, 134
and wealth, 120, 121, 145, 146, 150, 159
wealth, and money, 148, 150, 303
Riemann and Gauss, 29
Ritchie, Professor, 64
Rivalry, international, 109
River and tunnel, 47
Rossetti, 209
Rubies and wisdom, 160
Runaway horse, 75
Ruskin, 122, 149, 152, 153, 154, 161, 215, 297, 299, 301, 310
Tennyson and Morris, 156
Ruskin's political economy, 302
Russia and Black Sea, 105
and India and Japan, 105

Sacrifice, 189
of individuals, 187
Safety lamp, 214
Salaries, cheapness of high, 185
Sale of coal, 211, 244, 285
of land, 211
Salisbury, Lord, 105
Salvation, 189
Army, 319
Savage warfare, 115
Savings of labour, 123
Scepticism, 26
Schism, 92
Science and art and peace, 108
and faith, 327, 333, 335
and literature, 110
and philosophy, 62
and Tennyson, 330
and war, 114
co-operation in, 118
poet of, 335
Sciences, cosmic, 110
Self-control, 323
Self-determination, 20
and choice, 35, 46
Self-government, 79
local, 227
Selfishness, 300
Self-possession, 310
Senates of provinces, 80, 228
Sequence and simultaneity, 56
Sermon on the Mount, 130
Service of humanity, 163
according to need, 126
opportunity for, 131
public, 131, 182, 248
Shadwell, Dr. A., 243

Shakespeare, characters of, 23
and Milton, 148
and Newton, 164
Shareholders, 185
Shaw, Bernard, 92
Shoddy, 223
Sidgwick, Henry, 329
Simple life, 309, 310
Simultaneity and sequence, 57
Slaughter, lust of, 113
Slums, 202, 207
Smoke abatement, 265
and Coniston, 167
Smoky fires, 272, 273
flames, 278
Soap, 285, 288
Social experiments, 220, 228
experts, 192, 219
institutes, 210
reform, 295
study, 231
Societies, Friendly, 175
Society, conventions of, 93
Socrates, 146
Soil, fertility of, 252, 294
Solidarity, international, 116, 118
Solitary confinement, 221
Sorrow and pain, 82, 84
South Africa, 189
South America, 102
Sovereign, inscription on, 122
transfer of a, 134
Space, time, and matter, 14, 16, 18, 25
Speed, 14
motion, and force, 25
Spending and earning, 173
Spikenard, 207
Spin of tennis ball, 15
Spirit, public, 188
Sportsman and gun, 44
St. Paul's cathedral, 63
State of Maine, 101
Static idea of time, 12
Stocks and shares, 129
Stokers, 276, 277
Stoking, 275
automatic, 277
Storage of money, 128, 142
Storm and poets, 331
Stout, Professor, 6
Stoves, house, 276
Stream of time, 12
Struggle for existence, 84, 203, 205, 324
of humanity, 97
Subdivisions, 19
of space, 11
Succession, 25
in time, 13
Sunday address, 172
Supersistence, 25
Superstition, 333
Supervision and assistance, 51, 57
Surgeons and nurses, 115
Survival of fittest, 204, 324

Tachymeter, 15
Taft, President, 96
Tares and wheat, 89
Tax on export coal, 244
Taxes, 242, 245, 248
Taylor, Professor A. E., 6
Teleology, 46, 52, 55
Tennyson, 315, 316, 328, 329
and religion, 333
and science, 330
and Virgil, 335
Morris and Ruskin, 156
Test of wealth, 163
Thackeray, 301
Theory and practice, 195
Third law of motion, 8
Thompson, Sir Henry, 292
Three angles of triangle, 29
Thrift, 175
Time, and evolution, 24, 37
a limitation, 23
a progression, 13, 19
an unreality, 13
existence of, 17
is money, 161
reality of, 24
space, and matter, 14, 16, 18, 25
static idea of, 12
stream of, 13
succession in, 13
units of, 19

Time—*continued.*
value of, 161
Timing and aim, 42, 44
Toil, monotonous, 119
Town conditions, 208, 241
and country, 178, 202, 207, 210, 309
fog, 266, 267
Trade, extension of, 167
unions, 223
Train and pointsman, 44
Training, 312
for government, 192
Transcendental region, 4
Transfer, aim and direction of, 135
of bullets, 135
of money, 133, 134, 143, 150, 303
Treadmill and bicycle, 291
Treaty, arbitration, 100
Tree of Knowledge, 86
Triangle, three angles of, 29
Trigger, 40
Tropical medicine, 253
Trustee, 140
Truth and loyalty, 313
Tunnel and river, 47
Turkey and Armenia, 141
and Crete and Armenia, 139
and Crimea, 200
Two and two, 30
Tyndall, 317
Tyrol, 208
Italian, 104

Unearned increment, 133
Unemployed, 207
use of, 220
Unification, 32
Units, 14
of time, 18
Unknowable, 321
Unknown, 320
Unto this last, 301
Useless work, 289, 291, 292
Utopia, 126, 194, 284
William Morris's, 127

Value, 155
of education, 157, 161, 165, 166, 247, 252
of gold, 121
of helium, 121
of life, 169
of money, 160
of rates, 181
of time, 161
price and cost, 149
Variation, 324
Vastness, 317, 334
Veins of wealth, 307
Verdict of history, 100
Vice, 83, 85
Victory, organising, 114
Vigour in war, 113
Village life, 210
Virgil, 112
and Tennyson, 335
Voice and peak, 335
Volpone, 48

Wages, 335
Waldenses, 99
Wallace and Darwin and Huxley, 311
War, catastrophies in, 115
and Finance, 140
and its high qualities, 112
and money, 139
and science, 115
civil, 98
engines of, 97
European, 106
killing in, 113, 114
organisation in, 114
vigour in, 113
winning in, 98
Warfare, savage, 115
Wars, 200
and competition, 204
object of, 201
Water gas, 269
Watertight compartments, 333
Wealth, 153
and education, 169
and life, 308
and prosperity, 169
and riches, 121, 145, 146, 150, 159

Wealth—*continued*
corporate, 172, 180
definition of, 156, 157
impotence of, 178
money and riches, 149, 150, 300
ownership of, 143
production of, 146, 147
power of, 176, 177
test of, 163
veins of, 307
Weaving, 21
Wells, H. G., 194
Will and brain, 44
William Morris's Utopia, 127
Winning in war, 98
Wisdom and rubies, 160
Women, position of, 325
Wordsworth, 329
Work, and idleness, 241
and genius, 164
and leisure, 214
required by community, 187
useless, 289, 292, 293
Workhouses and gaols, 225
Working bee, 54
classes, 290
Works of art, 23, 37, 49, 82, 84, 85, 214
of art, immortality of, 25
Worm in flower-pot, 69
Wren, Christopher, 63

Yeast, 90
Youth, ideals of, 198, 202

Zeno of Elea, 7

RETURN TO the circulation desk of any
University of California Library

or to the

NORTHERN REGIONAL LIBRARY FACILITY
Bldg. 400, Richmond Field Station
University of California
Richmond, CA 94804-4698

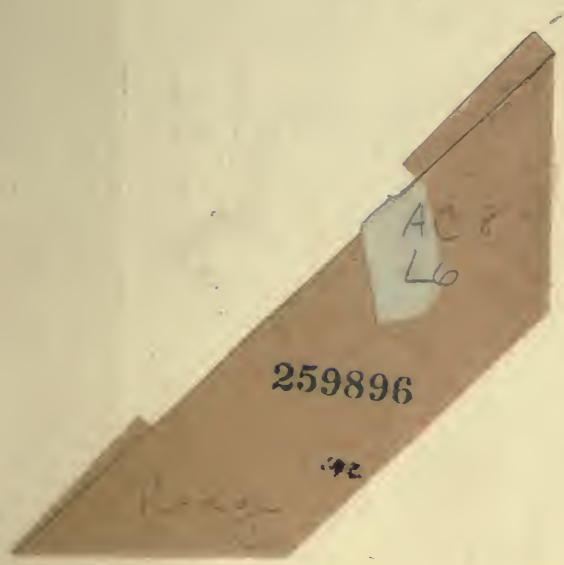
ALL BOOKS MAY BE RECALLED AFTER 7 DAYS

- 2-month loans may be renewed by calling (510) 642-6753
- 1-year loans may be recharged by bringing books to NRLF
- Renewals and recharges may be made 4 days prior to due date

DUE AS STAMPED BELOW

MAY 0 2 2003

DD20 15M 4-02

LD 21–100*m*-8,'34

YC 04935